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UNIVERSITY OF ILLINOIS 1971 / 1972

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

NDERGRADUATE STUDY 1971 / 1972

UNDERGRADUATE STUDY

UNIVERSITY OF ILLINOIS BULLETIN

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UNIVERSITY OF ILLINOIS

AT URBANA - CHAMPAIGN

1971 / 1972

UNDERGRADUATE STUDY

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University Calendar

Departments at **URBANA-CHAMPAIGN**

FIRST SEMESTER, 1971–1972

Labor Day all-campus holiday	Sept. 6, Mon.
New Student Program	Sept. 7, Tues., 1 p.m.–Sept. 12, Sun.
Registration	Sept. 9, Thurs., 8 a.m.–Sept. 11, Sat. (noon)
Instruction begins	Sept. 13, Mon., 7 a.m.
Veteran's Day Observance (classes dismissed 10:45 to 11:15 a.m.) (nonacademic holiday)	Oct. 25, Mon.
Thanksgiving vacation begins	Nov. 24, Wed., 1 p.m.
Thanksgiving all-campus holidays	Nov. 25, Thurs.–Nov. 26, Fri.
Thanksgiving vacation ends	Nov. 30, Tues, 1 p.m.
Christmas vacation begins	Dec. 18, Sat., 1 p.m.
Christmas all-campus holidays	Dec. 24, Fri.–Dec. 25, Sat.
New Year's all-campus holidays	Dec. 31, Fri.–Jan. 1, Sat.
Christmas vacation ends	Jan. 3, Mon., 1 p.m.
Last day of instruction	Jan. 15, Sat.
Semester examinations	Jan. 17, Mon.–Jan. 25, Tues.

SECOND SEMESTER, 1971–1972

New Student Program	Jan. 31, Mon.–Feb. 6, Sun.
Registration	Feb. 3, Thurs., 8 a.m.–Feb. 5, Sat. (noon)
Instruction begins	Feb. 7, Mon., 7 a.m.
Spring vacation begins	Mar. 25, Sat., 1 p.m.
Good Friday all-campus holiday (no classes)	Mar. 31, Fri.
Spring vacation ends	April 3, Mon., 1 p.m.
Honors Day (classes dismissed at noon)	May 5, Fri.
Last day of instruction	May 27, Sat.
Memorial Day all-campus holiday (no classes)	May 29, Mon.
Semester examinations	May 30, Tues.–June 7, Wed.
Commencement exercises	June 10, Sat.

EIGHT–WEEK SUMMER SESSION, 1972

Registration for off-campus courses, College of Law, and registration staff	May 25, Thurs.–May 26, Fri.
Registration of other undergraduate students	June 16, Fri.
Registration of other graduate students	June 16, Fri.–June 17, Sat., 2 p.m.
Instruction begins	June 19, Mon., 7 a.m.
Independence Day all-campus holiday (no classes)	July 4, Tues.
Beginning of second four-week courses	July 17, Mon.
Last day of instruction	Aug. 10, Thurs.
Summer session examinations	Aug. 11, Fri.–Aug. 12, Sat.

FIRST SEMESTER, 1972–1973

Labor Day all-campus holiday	Sept. 4, Mon.
Registration	Sept. 14, Thurs., 8 a.m.–Sept. 16, Sat. (noon)
Instruction begins	Sept. 18, Mon., 7 a.m.
Veteran's Day Observance (classes dismissed 10:45 to 11:15 a.m.) (non-academic holiday)	Oct. 23, Mon.
Thanksgiving vacation begins	Nov. 22, Wed., 1 p.m.
Thanksgiving all-campus holidays	Nov. 23, Thurs.–Nov. 24, Fri.
Thanksgiving vacation ends	Nov. 28, Tues., 1 p.m.
Christmas vacation begins	Dec. 22, Fri., 1 p.m.
Christmas Day all-campus holidays	Dec. 25, Mon.
New Year's Day all-campus holiday	Jan. 1, Mon.
Christmas vacation ends	Jan. 3, Wed., 1 p.m.
Last day of instruction	Jan. 13, Sat.
Semester examinations	Jan. 15, Mon.–Jan. 23, Tues.

SECOND SEMESTER, 1972–1973

Registration	Feb. 1, Thurs., 8 a.m.–Feb. 3, Sat. (noon)
Instruction begins	Feb. 5, Mon., 7 a.m.
Spring vacation begins	April 14, Sat., 1 p.m.
Good Friday all-campus holiday	April 20, Fri.
Spring vacation ends	April 23, Mon., 1 p.m.
Honors Day (classes dismissed at noon)	May 4, Fri.
Last day of instruction	May 26, Sat.
Memorial Day all-campus holiday (no classes)	May 28, Mon.
Semester examinations	May 29, Tues.–June 6, Wed.
Commencement exercises	June 9, Sat.

EIGHT–WEEK SUMMER SESSION, 1973

Registration for off-campus courses, College of Law, and registration staff	May 24, Thurs.–May 25, Fri.
Registration of other undergraduate students	June 15, Fri.
Registration of other graduate students	June 15, Fri.–June 16, Sat., 2 p.m.
Instruction begins	June 18, Mon., 7 a.m.
Independence Day all-campus holiday (no classes)	July 4, Wed.
Beginning of second four-week courses	July 16, Mon.
Last day of instruction	Aug. 8, Wed.
Summer session examinations	Aug. 9, Thurs.–Aug. 11, Sat.

Departments at **CHICAGO CIRCLE**

FALL QUARTER, 1971

Registration Week	Sept. 20, Mon.–Sept. 24, Fri.
Instruction begins	Sept. 27, Mon.
Veteran's Day (no classes)	Oct. 25, Mon.
Thanksgiving vacation	Nov. 25, Thurs.–Nov. 26, Fri.
Instruction ends	Dec. 3, Fri.
Final examinations	Dec. 6, Mon.–Dec. 10, Fri.

WINTER QUARTER, 1972

Registration Week	Dec. 13, Mon.–Dec. 17, Fri.
Instruction begins	Jan. 3, Mon.
Lincoln's birthday (no classes)	Feb. 7, Mon.
Instruction ends	Mar. 10, Fri.
Final examinations	Mar. 13, Mon.–Mar. 17, Fri.

SPRING QUARTER, 1972

Registration Week	Mar. 20, Mon.–Mar. 24, Fri.
Instruction begins	Mar. 27, Mon.
Good Friday (no classes)	Mar. 31, Fri.
Honors Day	May 12, Fri.
Memorial Day holiday (no classes)	May 29, Mon.
Instruction ends	June 2, Fri.
Final examinations	June 5, Mon.–June 9, Fri.
Commencement	June 18, Sun.

SUMMER QUARTER, 1972

Registration Week	June 12, Mon.–June 16, Fri.
Instruction begins	June 19, Mon.
Independence Day holiday (no classes)	July 4, Tues.
Instruction ends	Aug. 25, Fri.
Final examinations	Aug. 28, Mon.–Sept. 1, Fri.

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Illini Union — social and recreational center for students and staff.

Undergraduate Study

From February 28, 1967, to March 11, 1968, the University of Illinois observed the one-hundredth anniversary of its founding, with confidence that from its distinguished past has evolved a promising future.

On July 2, 1862, Abraham Lincoln signed the Land Grant College Act. As a direct result of that legislation, the University of Illinois was chartered as the "Illinois Industrial University" on February 28, 1867.

It opened on March 2, 1868, with three teaching faculty members and fifty male students in a converted second-hand building on which construction had begun some years earlier to house a proposed "seminar of learning" called the "Urbana and Champaign Institute." In addition to legislative appropriations, early funds were contributed by private local citizens, by Champaign County, and by the Illinois Central Railroad Company. By the end of the first year, enrollment had grown to seventy-seven, and an additional faculty member had been added.

On March 9, 1870, the Board of Trustees authorized the admission of women as students, and twenty-four availed themselves of the new opportunity the first year. At the present time, women constitute more than one-third of the total enrollment on the Urbana campus.

By act of the State Legislature in June, 1885, the name of the Illinois Industrial University was officially changed to the University of Illinois.

In 1896 the School of Pharmacy, changed in 1932 to the College of Pharmacy, became the first unit of the health sciences to be affiliated with the University of Illinois at the professional campus, now the Medical Center in Chicago. Medicine followed in 1897 and Dentistry in 1901. The program in nursing education which had been functioning for many years through agreements with the State Department of Public Welfare and affiliations with several Chicago hospitals, administered by the Chicago professional colleges of the University, was formally organized in 1952 as the School of Nursing, later becoming the College of Nursing. The Chicago Undergraduate Division began operation at Navy Pier in Chicago in 1946. Upon construction of a new campus, this Division was moved and became the University of Illinois at Chicago Circle in February, 1965.

During the ensuing years since its founding, the University has contnued to grow and develop within its three-fold concept of education, research, and service, and more than 240,600 degrees have been conferred at all campuses through December, 1970. The combined faculty and staff of the three divisions now include the full-time equivalent of more than 19,300 salaried members, and the enrollment now totals more than 55,600, of which 34,018 are enrolled at the Urbana-Champaign campus. The physical plant and facilities in use as of June 30, 1970, were valued at $693,324,685, including $426,666,370 at the Urbana-Champaign campus. University endowment

funds on the three campuses as of June 30, 1970, total $10,781,762, in addition to $6,753,117 administered by the University of Illinois Foundation.

The University Library is the largest in any state university, third among all American universities, and the fifth largest among all libraries in the country. The Urbana-Champaign collection is comprised of 6,242,656 items, including 4,416,330 volumes in addition to films, pamphlets, music scores and parts, maps, and manuscripts, and is currently receiving subscriptions to some 79,254 serial titles, including periodicals and newspapers. Exchange relations are maintained with 3,168 institutions in ninety-two countries.

The central administrative offices are located on the oldest and largest campus of the University about 128 miles south of Chicago at Urbana-Champaign, a community with a combined population estimated at 95,500. Each campus is administered under the direction of a Chancellor, who is the chief educational officer. On the Urbana-Champaign campus, undergraduate and professional instruction, as described in this catalog, is offered in the College of Agriculture, Institute of Aviation, College of Commerce and Business Administration, College of Communications, College of Education, College of Engineering, College of Fine and Applied Arts, College of Law, College of Liberal Arts and Sciences, College of Physical Education, and College of Veterinary Medicine. A bachelor's or professional degree is conferred upon completion of a curriculum in any of these units of the University except the Institute of Aviation which offers two-year terminal programs in aircraft maintenance, professional pilot training, and aviation electronics. A complete list of fields of study available to undergraduate and professional students on the Urbana-Champaign campus is given on page 20.

The Chicago Circle campus offers undergraduate curricula and courses in the Colleges of Architecture and Art, Business Administration, Engineering, Liberal Arts and Sciences, and Education, including the School of Physical Education, and the recently approved College of Urban Sciences is in process of development. In addition, preprofessional courses of study necessary for admission to the professional colleges at Urbana-Champaign and the Medical Center in Chicago are available. The former Undergraduate Division at Navy Pier became a degree-granting unit of the University upon completion of the Chicago Circle campus in February, 1965. The first graduating class received degrees from the Colleges of Business Administration and Liberal Arts and Sciences in June, 1966. Currently, the Chicago Circle campus provides one or more years of work in many fields similar to those available on the campus at Urbana-Champaign. It has some programs, however, that are unique to the Chicago campus. Graduate work in a number of disciplines was inaugurated at the master's level in the fall quarter of 1967 and at the doctor's level in 1968. Additional offerings are gradually being introduced to provide full undergraduate and graduate programs at the new campus.

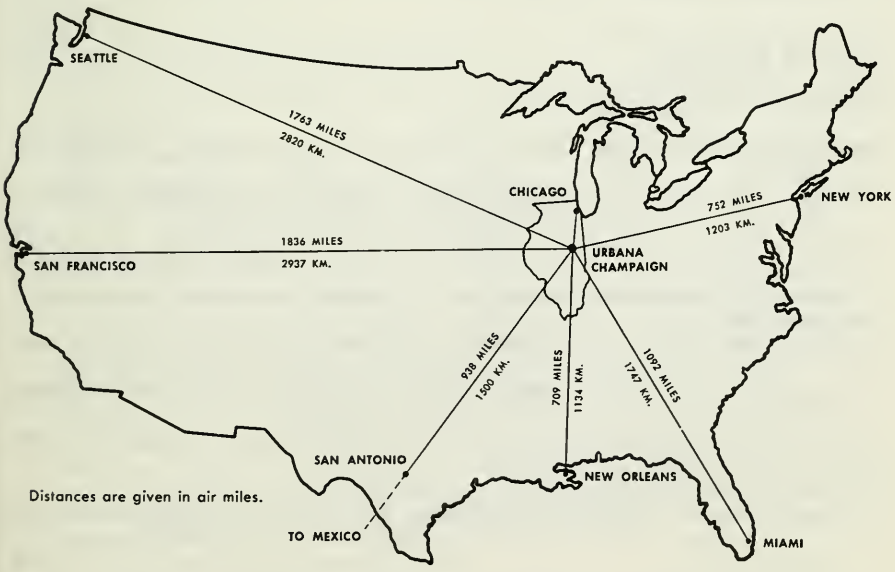
The Graduate School of Social Work operates as a single academic unit with complete programs on both the Urbana-Champaign and Chicago

Circle campuses. Similar programs of academic studies and field practice are carried on in each place, except that group training is offered only in Chicago.

Graduate instruction, first offered in 1874, is now provided at the master's and/or doctor's level by eighty-one departments on the Urbana-Champaign campus of the University of Illinois in one hundred forty-eight fields of instruction which are described in the Graduate College catalog.

The College of Law provides an education for the legal profession at its location in Urbana-Champaign. Persons interested in law study should secure a copy of the catalog of the College of Law. The professional College of Veterinary Medicine educates men and women in the medical disciplines involving the animal kingdom. This program is described on pages 443 to 447 of this catalog. (See page 58 for requirements for admission to these colleges.)

Undergraduate, professional, and graduate curricula in dentistry, medical art, medical dietetics, medical record administration, medical technology, medicine, nursing, occupational therapy, and pharmacy are offered on the campus of the University at the Medical Center in Chicago and are described in detail in separate catalogs. Varying amounts of preprofessional study are required prior to registration in these departments of the University. (See page 60 of this catalog for statement of requirements for admission to these professional curricula.)



The Urbana-Champaign campus of the University of Illinois is served by the Illinois Central Railroad, the Norfolk and Western Railroad, Ozark Airlines, and the Crown Transit Lines, Greyhound, and Illini Swallow bus lines. United States Highways 36, 45, 136, and 150, Interstate Highways 57 and 74, and State of Illinois Highways 10, 47, 49, and 130 pass through or near the community.

FIELDS OF STUDY AVAILABLE TO UNDERGRADUATES AT URBANA-CHAMPAIGN

The table below lists the general programs of study which an undergraduate student may follow at the Urbana-Champaign campus of the University. It does not attempt to enumerate all the classes offered, since in a typical first semester approximately 5,500 different courses are available in some 8,808 sections, not including registrations in graduate courses for individual instruction, nor does it list all the subjects which may be taken as minors or as supplementary work. The individual courses are described in a separate catalog, *Undergraduate Courses.*

Many of the curricula offer several options to permit the student to satisfy his particular needs. Some of the major programs of study, or curricula, may be begun at the start of the freshman year. For others, the student must complete a year or more of general introductory or preparatory study before starting the specialized curriculum. Specific requirements for admission to each program are given in the Admissions Chart on pages 38 to 48, and a list of available undergraduate and professional degrees is shown on page 147. Graduate degrees are described in the Graduate College catalog.

Effective in September, 1971, beginning freshmen will be required to remain in the college to which they have been admitted for at least two semesters of full-time study in the prescribed freshman program. Students who wish to transfer to another college at the end of one year will compete for any available spaces and must meet the accepting college's requirements for admission. Because of severe enrollment limitations, it is extremely unlikely that students may later transfer to the following curricula: art, art education, elementary education, preveterinary medicine, special education, theatre, and urban planning. College offices will consider individual requests by students to transfer from one college to another after one semester in residence for unusual and extenuating circumstances.

Open to Freshmen

COLLEGE OF AGRICULTURE

Agricultural Communications (options in advertising, news-editorial, and radio-television)

Agricultural Industries (areas of special interest: agricultural commodities, agricultural real estate and finance, farm supplies, food and food products)

Agricultural Science (including a four-year program in several areas for students desiring preparation for graduate study or professional work, a five-year combined program with agricultural engineering, and preprofessional preparation for law)

Core Curriculum

All students in this curriculum follow a similar program during the first two years leading to specialization during the last two years in one of the following:

Agricultural Economics (options in farm management, agricultural marketing, general agricultural economics, and rural sociology)

Agricultural Mechanization (areas of emphasis: farm structures, conservation, farm power, and farm machinery)

Agronomy (options in agronomy, crops, soils, and crop protection)

Animal Science (fields of animal feeding and nutrition, breeding and genetics, production, or related fields of the livestock and poultry industry)

Dairy Science

General Agriculture

Horticulture (fruits, vegetables, or other specialized horticultural crops)

Food Industry (options in business, engineering, and production)

Food Science

Forest Science

Home Economics (options in apparel design, the child and the family, foods in business, foods and nutrition, general home economics, hospital dietetics, household management, institution management, retailing of clothing and home furnishings, and textiles and clothing). Students may also combine advertising, journalism, and radio-television with home economics. See page 225.
Home Economics Education (for prospective teachers of home economics)
Ornamental Horticulture (specialization in production, marketing, and use of ornamental crops, and related professional activities)
Preveterinary Medicine (also offered in the College of Liberal Arts and Sciences)
Restaurant Management

Teaching of Agricultural Occupations, high school level (options in agricultural production, agricultural supply, agricultural mechanization, agricultural products-plants, agricultural products-animals, ornamental horticulture, and agricultural resources and forestry)
Wood Science

INSTITUTE OF AVIATION (TWO—YEAR TERMINAL CURRICULA)

Aircraft Maintenance (including combined flight-maintenance program)
Aviation Electronics
Profession Pilot
Flight courses are open to students enrolled in other schools and colleges on a space-available basis.

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

The first two years of work in all fields in Commerce and Business Administration are almost the same. Students later concentrate in one of the following major fields:
Accountancy
Business Administration (including marketing and administrative science options)
Economics (several specialized sequences)
Finance (areas of specialization in finance, investment, and banking; insurance and risk management; and in urban land economics, including a residential development option)
Curriculum Unassigned (Temporary classification for students in the College of Commerce and Business Administration who have not selected a degree program. Selection must be made by the end of the sophomore year.)

COLLEGE OF EDUCATION

Business Education (areas of specialization in accounting-bookkeeping, data processing, economics, marketing and distributive education, and secretarial-office practice)
Curriculum in Early Childhood Education (preparation for teaching at the kindergarten and pre-kindergarten level)
Curriculum Preparatory to Elementary School Teaching (general option and specialty for elementary school librarians)
Technical Education Specialties, formerly Industrial Education (preparation to teach a specialty at one or more school levels—elementary, secondary, technical institute, junior college, or industrial training program—with specialties in electronics, machine tools, avionics, machine tool drafting, architectural drafting, and construction, as well as industrial arts)
Teaching Deaf and Hard-of-Hearing Children
Teaching Mentally Handicapped Children

COLLEGE OF ENGINEERING

A common program is followed by freshmen in Engineering so that a student may change from one of the following curricula to another at the end of the first year without loss of credit.

Aeronautical and Astronautical Engineering

Agricultural Engineering (options in electric power and processing, farm structures, power and machinery, and soil and water)

Ceramic Engineering

Civil Engineering (areas of specialization: hydraulic and sanitary, structural, transportation, including highways, traffic, and railways, and photogrammetry and geodesy)

Combined Five-Year Agricultural Engineering-Agricultural Science Program (freshmen enter College of Agriculture)

Combined Five-Year Engineering-Liberal Arts and Sciences Program (freshmen enter College of Engineering)

Electrical Engineering

Electrical Engineering and Computer Science

Engineering Mechanics (for students interested in research and development in engineering)

Engineering Physics (including basic preparation for atomic and nuclear engineering)

General Engineering (fields of concentration in engineering administration, engineering meteorology, engineering publications, engineering sales, and mining and geological engineering)

Industrial Engineering

Mechanical Engineering (including heating, ventilation, and air-conditioning)

Metallurgical Engineering

Teaching of Engineering Technology (electronics and mechanical options)

COLLEGE OF FINE AND APPLIED ARTS

Architectural Studies

A four-year program for new freshmen and transfers beginning an architectural program in September, 1969, and thereafter.

Art

- **Art Education** (for prospective teachers)
- **History of Art**
- **General**

  All freshmen in Art curricula except those in Art Education and in History of Art enter the General Curriculum. Before beginning their third year's work, such students must select one of the following degree curricula:

- **Crafts** (ceramic or metal emphasis)
- **Graphic Design**
- **Industrial Design** (art or structural emphasis)
- **Medical Art** (five-year program combined with College of Medicine; the first three years are given on the Urbana-Champaign campus.)
- **Painting**
- **Sculpture**

Dance (applied program for men and women)

Landscape Architecture

Music, with majors in:

- History of Music
- Instrumental Music
- Music Composition
- Voice

Music Education (vocal-choral or instrumental emphasis) for prospective teachers

Teaching of Dance

Theatre Curricula

- **Theatre: Acting**

Theatre: Directing and Playwriting Bases
Theatre: Technology and Design (costume and scenery options)
Urban Planning

COLLEGE OF LIBERAL ARTS AND SCIENCES

Chemical Engineering
Chemistry
Combined Five-Year Engineering-Liberal Arts and Sciences Program (freshmen enter Engineering)
Combined Sciences and Letters-Education Program for Mathematics Teachers
General (two-year curriculum, emphasizing advising and counseling, for the student who chooses to defer selection of a major)
Geology
Physics
Preprofessional Curricula:
Medical Dietetics (See page 63.)
Medical Record Administration
Medical Technology
Occupational Therapy
Predentistry
Prepharmacy
Preprofessional Nursing
Preveterinary Medicine (also offered in the College of Agriculture)
Sciences and Letters (including preprofessional preparation for Communications, Law, and Medicine. See page 359.)
Students in this curriculum take two years of basic work followed by a major in one of the following subjects:
Actuarial Science (mathematics)
American Civilization
Anthropology
Astronomy
Biochemistry
Biology (general and honors majors)
Botany
Chemistry
Economics
English
Entomology
Finance
French (literature or language and linguistics)
Geography
Geology
German
Greek
History
History of Art
Home Economics
Italian
Latin
Mathematics
Mathematics and Computer Science
Medieval Civilization
Microbiology
Music
Philosophy
Physics
Physiology

Political Science
Portuguese Language and Literature
Psychology (options in *general psychology* and in *graduate preparatory psychology* with specialization in experimental or social-personality psychology, and in *applied psychology* with specialization in engineering psychology, personnel psychology, measurement psychology, and school psychology)
Rhetoric and Composition
Russian
Russian Language and Area Studies
Social Welfare (interdepartmental program which satisfies both major and minor)
Sociology
Spanish
Speech (areas of emphasis: general speech, public address, interpretation, theatre, speech science and phonetics, speech correction and audiology)
Statistics (mathematics)
Zoology

Speech and Hearing Science I (A.B. program)

Speech and Hearing Science II (B.S. program, for certification)

Teacher Education (secondary) in fields of biology, chemistry, earth science, English, geography, mathematics, physics, social studies, and speech

Teacher Education (both high school and elementary) **in Foreign Languages** (French, German, Latin, Russian, Spanish)

COLLEGE OF PHYSICAL EDUCATION

Health and Safety Education (for men and women) with options, selected in the junior and senior years, in School Health Education and School Safety Education (teacher education programs), and in Community Health Education and Public Safety Education.

Physical Education for Men (options for the High School Certificate, grades six through twelve, for the Special Certificate, grades kindergarten through fourteen, for the teacher education minor in coaching, and for the teacher education minor in physical education for men)

Physical Education for Women (including general teacher education options for the High School Certificate, grades six through twelve, and the Special Certificate, kindergarten through grade fourteen)

Recreation (including options in general recreation, park administration, outdoor recreation, and therapeutic recreation)

Open to Transfer and Advanced Students

Qualified transfer students may enter all the courses of study available to freshmen. They also may enter the following if they meet the requirements for advanced standing as given for each college.

COLLEGE OF COMMUNICATIONS

Applicants must have sixty semester hours of undergraduate college work with a minimum average of 3.5 (midway between "B" and "C"). No applicant whose grade-point average in all college work less than 3.5 is admitted except on approval by the college of an individual petition for admission. (See page 244.) Curricula are:

Advertising

News-Editorial (areas of special interest: newspaper journalism, magazine journalism, radio-television journalism, and community journalism)

Radio-Television (to prepare students for work in all except the technical phases of radio and television)

COLLEGE OF EDUCATION

The Curriculum Preparatory to High School Teaching requires junior standing and a minimum academic average of 3.5 (midway between "B" and "C"), or special approval. Applicants with average below 3.5, but at least 3.3, may be considered for admission on an individual basis by petition. Students admitted on this basis are placed on academic probation during their first semester of attendance. Areas of specilization are listed beginning on page 262 in the College of Education section of this catalog. (See Admissions Chart beginning on page 38 for complete statement of requirements for admission to teacher education curricula in Education and in the various other colleges.)

COLLEGE OF ENGINEERING

A thirty-two semester hour post-baccalaureate program designed to provide additional training and depth of subject matter is available for persons who are currently teaching in the area of engineering technology. A certificate in the Teaching of Engineering Technology is awarded upon completion of the program.

COLLEGE OF FINE AND APPLIED ARTS

In addition to other curricula in this college, new transfer students may enter the curriculum in Architecture (general and engineering options). This is a five-year program for students who began an architectural program before September, 1969.

COLLEGE OF LAW

Applicants for entrance into the College of Law must have a bachelor's degree from an accredited four-year college or university, with a minimum grade average of 3.5 (midway between "B" and "C"). The requirement of a prior degree may be waived in exceptional cases by special action of the Admissions Committee of the College of Law. All applicants must take the Law School Admission Test and furnish the score on that test to the college. Students with averages slightly below 3.5 may petition for admission if the petition is supported by high scores on the Law School Admission Test and other evidence of high aptitude for the study of law. The work in the College of Law requires three years, full time, to complete. New students are admitted only in September. (See page 58 for additional information.)

COLLEGE OF VETERINARY MEDICINE

Preprofessional curricula preparatory to admission to the College of Veterinary Medicine are offered both in the College of Agriculture and the College of Liberal Arts and Sciences.

Applicants for entrance into the College of Veterinary Medicine must have at least sixty hours of acceptable college credit, exclusive of military and physical education, and a minimum average of 3.5 (midway between "B" and "C") in all college work. Preparation for entrance into this college must include certain required subjects. Candidates for admission may be required to appear for personal interviews and to present test scores. New students may enter this college only in September. (See pages 48 and 59 for additional information.)

TEACHER EDUCATION CURRICULA

Programs in teacher education for prospective school teachers are administered in the College of Education and in the various colleges in which the major subjects are offered. For example, a student who plans to teach a language in elementary or secondary school, or a number of other secondary school subjects offered by the College of Liberal Arts and Sciences, enters that college; a student who plans to teach agricultural occupations enrolls in the College of Agriculture; and the student who expects to teach

art, dance, or music enrolls in the College of Fine and Applied Arts. Prospective athletic coaches and physical education teachers usually register in the College of Physical Education. For a compete list of teacher education curricula, see the Admissions Chart beginning on page 38 and the Council on Teacher Education section on pages 251 to 256.

A student with sixty or more semester hours (inclusive of military and physical education) who wishes to enter a teacher education curriculum in any college must have an all-University grade-point average of at least 3.5. Students whose averages are below 3.5, but not less that 3.3, may be admitted on probation upon approval of a petition addressed to the Urbana Council on Teacher Education, 120 Education Building, Urbana 61801.

Details concerning requirements in each of the above programs are given in the various college sections of this catalog. A list of the undergraduate degrees offered by the University at Urbana-Champaign may be found on page 147.

ADMISSION

The Urbana-Champaign campus of the University operates on a two-semester plan, with an additional summer session. Qualified applicants, except in the Colleges of Law and Veterinary Medicine, are admitted at the beginning of any term provided space is available in the desired curriculum. Each new class in Law and Veterinary Medicine begins with the first semester of the academic year.

The Chicago Circle campus and the Medical Center operate on the quarter system.

Application for Admission

The following admission policies and regulations are in effect as of December 1, 1970, the date for submission of materials for the 1971–1972 *Undergraduate Study* catalog. Changes could occur between December 1, 1970, and September 25, 1971, the beginning date for the acceptance of applications for beginning freshmen who will be applying for the fall semester of 1972.

In order that the applicant may be aware of each specific step in applying for admission and his chances for acceptance in terms of the academic criteria used in determining his admission status, the Office of Admissions and Records will send the applicant an informative statement on these matters at the time he is sent an application blank.

Prospective applicants, parents, counselors, and others are always welcome to write or visit the Office of Admissions and Records for the current information about admission policies and procedures.

At the Urbana-Champaign campus, in certain undergraduate programs, spaces for both beginning freshman and transfer applicants will be severely limited in number. Consequently, many well-qualified students who apply will not be admitted. Beginning freshman and transfer applicants must satisfy a prescribed distribution of high school subjects (see Admissions Chart on page 38). In addition, beginning freshmen are considered on the basis of a combination of high school percentile rank and test score, either the composite score on the American College Test or the combined verbal and mathematics score on the Scholastic Aptitude Test. Consult the Admissions Chart on page 38 for additional information concerning grade-point average and other requirements for transfer students.

WHEN TO APPLY

Except where otherwise indicated in the Admissions Chart on pages 38 to 48, new students may enter the University at the beginning of any term. Because of space limitations, early application is urged.

Applications may be submitted *on or after* the following dates, but not before:

September 25	For admission of all students in the following spring semester.
September 25	For admission of beginning freshmen in the following fall semester, including those students who wish to enter in the summer session and continue in the fall.
March 1	For admission of all students in the following summer session who do not intend to continue in the fall.
March 1	For admission of new transfers and readmission of all former students in the following fall semester.

FRESHMEN

Applications for admission to the Urbana-Champaign campus of the University as beginning freshmen will be accepted from all students who have completed six semesters or more of high school work (four semesters in a three-year senior high school). All freshman applicants are strongly urged to complete the ACT or SAT in the spring of the junior year and to submit their completed applications as soon as possible after September 25 of the senior year.

All completed applications which reach the Office of Admissions and Records between September 25 and a date in November which will be specified on the application form will be acted upon at the same time, and each applicant will be informed of his admission status approximately one month later. Thereafter, qualified applicants will be admitted on a first-come first-served basis as long as spaces remain in the chosen curriculum, and they will be notified concerning their admission status on a weekly basis.

An application is considered complete when the Office of Admissions and Records has on file the student's application, his official high school transcript, his admission test score, and the nonrefundable $15.00 application fee. Additional special requirements in certain curricula are listed in the Admissions Chart beginning on page 38.

Because the $15.00 application fee is utilized to defray processing costs, it is nonrefundable for both approved and denied applicants. This includes applicants who submit partial as well as complete applications prior to the date all spaces are filled in the college and curriculum of their choice. (See page 137.)

Approved applicants will be given approximately three weeks to indicate whether or not they wish to accept the opportunity to come to the University. A nonrefundable advance deposit on tuition and fees of $30.00 is required of most approved applicants to secure the place reserved for them, and this deposit must be returned by the due date indicated on the advance deposit card which is sent along with the letter of eligibility. (See page 137.)

TRANSFERS AND READMISSIONS

Applications from new transfer and former students currently registered in another collegiate institution should be submitted as soon as possible after beginning their final term of college work before the desired entry date. In most cases, transfer applicants with fewer than sixty hours will not be admitted.

ADMISSION AND READMISSION IN THE SUMMER SESSION

Completed applications for admission, or readmission where required, in the summer session will be accepted on or after March 1, but not before. (See page 56.)

APPLICATION DEADLINES

An application is not complete until all necessary credentials have been received, including the application fee when required.

The University has established deadline dates for filing complete applications for admission and readmission to a fall semester as follows:

1. Domestic Students
   In the case of domestic students seeking admission or readmission, two weeks prior to the first day of the registration period for the fall term of each year.

2. Foreign Students
   In the case of foreign students seeking admission who have not attended a college or university in the United States, six weeks prior to the first day of the registration period for the fall term of each year.

   In the case of foreign students seeking admission or readmission who have attended a college or university in the United States, the regulation covering domestic students applies.

The above deadlines apply as long as space remains available in the desired curriculum. The Director of Admissions and Records may accept applications after final deadline dates under exceptional circumstances which patently justify special consideration.

APPLICATION DEADLINES FOR SPECIALIZED PROGRAMS

The University has established the following deadline dates for accepting complete applications for admission and readmission to certain specialized programs at Urbana-Champaign:

1. Complete applications for admission to the College of Veterinary Medicine should be received no later than March 1 prior to September admission. (See College of Veterinary Medicine section on pages 444 and 445.)

2. Complete applications for admission to the College of Law should be received in the college office no later than March 15 prior to the beginning of the term to which admission is requested. (See page 58.)

3. Deadline dates for filing applications for admission to the professional colleges at the Medical Center in Chicago are given in the section of this catalog dealing with admission to those colleges. (See page 60.)

WHERE TO APPLY

Application should be made to the branch of the University which the student wishes to attend.

For Admission at Urbana-Champaign, to

The Director of Admissions and Records
University of Illinois at Urbana-Champaign
100A Administration Building
Urbana, Illinois 61801

For Admission to the Chicago Circle campus, to

The Director of Admissions and Records
University of Illinois at Chicago Circle
P.O. Box 4348
Chicago, Illinois 60680

For Admission to the Professional Colleges at the Medical Center in Chicago, to

The Director of Admissions and Records
University of Illinois at the Medical Center
P.O. Box 6998
Chicago, Illinois 60680

HOW TO APPLY

Application blanks may be obtained from the Office of Admissions and Records of the appropriate campus.

Both freshman and transfer applicants should consider very carefully their choice of program. Except under exceptional circumstances, students will not be permitted to change colleges until after they have completed at least one academic year at the University on the Urbana-Champaign campus.

After deciding which college and curriculum he wishes to enter, the applicant should fill out completely the application blank, following carefully the instructions printed thereon. College and curriculum must be indicated on the original application; major area of specialization, when known, also should be indicated. A nonrefundable application fee of $15.00 must accompany the application for admission or readmission. See page 137.

Each student is expected to pursue a normal program of studies. The number of hours varies with the college and curriculum, and more or less than a normal program may be permitted only with the approval of the dean of the student's college, or his delegated representative. An applicant who wishes to carry only a partial program must indicate this intent at the time he applies for admission. Admission and continuation of a part-time student must be approved by the college of the student's choice, and registration of such students may be deferred or denied in those programs where spaces are limited.

Official high school and college credentials should be sent directly from each institution previously attended; test scores must come directly from the headquarters of the testing agency. (See page 35.)

Special procedures applying to foreign applicants are described on page 32.

Records of service in the Armed Forces of the United States and records of correspondence or other study should accompany the application.

Students who expect to apply for scholarship aid should fill out and submit with the application for admission an application for financial aid.

All students are required to present Social Security numbers which serve as permanent identification numbers. Students who do not have such a number should obtain one from their local Social Security Office before coming to the campus. This number should be recorded on the application for admission to the University and on the ACT form.

A student seeking transfer to the University who is on probation or dropped from a previous collegiate institution for poor scholarship must obtain the approval of the dean of the college he wishes to enter; a student seeking transfer to the University who is on probation or dropped from a previous collegiate institution for disciplinary reasons must obtain the approval of the appropriate Subcommittee of the Senate Committee on Student Discipline.

SOURCES OF ACCEPTABLE CREDITS

The credits required to qualify for admission to the undergraduate colleges may be obtained in the following three ways:

1. **By Certificate from an Accredited High School or Other Secondary School**

   A student presenting a certificate from any high school or preparatory school in Illinois fully recognized by the Office of the Superintendent of Public Instruction in Illinois is given entrance credit for all subjects named therein for which the school is specifically accredited. Entrance credits are also accepted on certification from the following sources:

   a. Schools accredited by the North Central Association of Colleges and Secondary Schools.
   b. Schools accredited by the Southern Association of Colleges and Secondary Schools.
   c. Schools approved by the New England Association of Colleges and Secondary Schools.

d. Schools approved by the Middle States Association of Colleges and Secondary Schools.
e. Schools approved by the Northwest Association of Secondary and Higher Schools.
f. Schools approved by the Western College Association.
g. High schools and academies registered by the Regents of the University of the State of New York.
h. Schools accredited by state universities, provided the certificate shows that the Illinois standard time requirements have been met. (See page 36 for definition of high school "unit.")

High School Credit Completed Prior to the Ninth Grade

Credit completed prior to the ninth grade is accepted by the University if it appears on the transcript of a fully recognized high school and is certified by the principal to be a course equivalent in quality and quantity to the course ordinarily offered in the high school. Such credit usually applies to elementary algebra and foreign language, but might apply to any subject.

Supplementary Certificates

Supplementary certificates from high school principals covering work done and examinations taken in addition to work shown on certificates previously submitted may be accepted in all cases where they refer to work done and examinations passed *prior to the student's admission to the University.* Having once entered the University of Illinois, the student is required to obtain his credit in the examinations given by the University, and supplementary certificates relating to secondary school work done and examinations passed in the summer or at other times after his entrance to the University are not acceptable.

2. **By Examinations**

a. *Entrance Examinations.* Entrance examinations in high school subjects are required only to remove specific entrance deficiencies. Students who do not meet the subject requirements for admission to their chosen college and curriculum, or who did not graduate from an accredited secondary school, may gain admission to a specific curriculum of the University by passing entrance examinations. Entrance examinations are given without fee at the Urbana campus by appointment upon individual request in advance of registration for the fall, spring, and summer sessions. These examinations are closed to matriculated students after they begin their second year in the University.

Entrance examinations administered by the University are offered in the following subjects: algebra, one or two years; American government, one year; American history, one year; biology, one year; chemistry, one year; English composition and rhetoric, one or two years (ordinarily offered in the eleventh or twelfth grades of secondary school); French, one or two years; plane geometry, one year; solid geometry, one-half year; German, one or two years; general mathematics, one year; Latin, one or two years; physics, one year; Spanish, one or two years; trigonometry, one-half year; world history, one year, and other subjects approved by the Office of Admissions and Records. Students who wish to take entrance examinations are given tests selected by or prepared under the supervision of the Office of admissions and Records. High school examinations are given only to students who wish to qualify for admission to the University.

For the requirements in the various subjects, and examination programs, write to the Director of Admissions and Records, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801. (See page 35 for information concerning the admission testing program for freshman applicants.)

b. *General Educational Development Tests.* Veterans, personnel currently serving in the Armed Forces, and civilians who are nineteen or more years of age who are not otherwise eligible, may qualify for admission to certain divisions of the University by passing with satisfactory scores the high school level General Educa-

tional Development Tests. In special cases approved by the Director of Admissions and Records, these tests may be used for applicants under nineteen years of age. Non-veteran, non-high school graduates, regardless of age, may take these tests at any time following the graduation of the class with which the student would normally have graduated. Single General Educational Development Tests may be authorized to complete specific requirements for admission.

A person who has attended, but has not graduated from, a recognized high school, or a graduate of a recognized high school who can not meet the general University requirements may be admitted to the University on the basis of the General Educational Developmental Tests, provided that he has the necessary specific subjects required for admission to the curriculum he wishes to enter. These tests allow the following credit:

English	5 units
Mathematics	2½ units
Social Studies	4 units
Natural Sciences	3½ units

The above credits meet the University English admission requirement. The General Educational Development mathematics credit *does not* satisfy the algebra-geometry requirement.

A student who has attended an unrecognized high school may validate credit earned in the unrecognized high school by passing the General Educational Development Tests.

Credits earned through General Educational Development Tests may be applied toward satisfying specific subject requirements; they may substitute for high school graduation; and they may be used to establish rank for applicants who have not graduated from high school. (See also page 90.)

c. *American College Test.* Applicants who meet the age requirement for admission to the University may use the American College Test in lieu of the General Educational Development Test in validating credit earned in an unrecognized high school; meeting the requirement of high school graduation; establishing high school rank in class; and in satisfying specific subject deficiencies.

The same credit allowance is made for the American College Test as for the General Educational Development Tests.

As in the general Educational Development Tests, the mathematics credit allowed for the American College Test *does not* satisfy the algebra-geometry requirement for admission but does satisfy the English requirement for admission.

3. **By Transfer from Another College or University of Recognized Standing**

Credits may be accepted for advanced standing from another university or college of recognized standing. A complete statement of requirements for admission by transfer is given on page 52.

APPLICATION PROCEDURES

Listed below are the procedures and credentials required for various types of applicants. It should be noted that all credentials presented for admission or readmission become the permanent property of the University, and are not subsequently released to the student or to another individual or institution.

1. **Applications of High School Seniors**

The Director of Admissions and Records is authorized to consider applicants for admission on the basis of official documents from high schools and other secondary schools as follows:

a. A statement of six semesters (four semesters in a three-year senior high school plus certification of the work previously completed in the junior high school) of

completed high school work (or seven semesters, for applications received after the close of the student's seventh semester);
b. A statement of the courses being taken in the seventh semester;
c. A statement of the courses to be taken in the eighth semester;
d. The date of probable graduation;
e. An estimate of the applicant's scholastic rank in his class;
f. Official scores received on prescribed admission tests (see page 35).

Under special circumstances, seniors in Illinois high schools may be permitted to enroll in University courses. (See page 76.)

2. **Applications of High School Graduates**

Application and complete transcript of high school record, including certification of graduation, should be submitted as early as possible after September 25 preceding the semester the applicant wishes to enter, or after March 1 if admission is sought in the summer session. (For a list of sources from which credits are accepted on certification, see page 29.)

3. **Applications of Nongraduates of Accredited Secondary Schools**

An applicant who has attended but has not been graduated from an accredited school should make early application in order to allow ample time for removal of deficiencies for admission. Such an applicant must pass entrance examinations in English composition and in four units of additional subjects to be designated by the University authorities. The remaining units required for admission also may be acquired by passing entrance examinations, or may be offered by certificate from an accredited school. Other tests selected by or prepared under the supervision of the Office of Admissions and Records may be substituted for the usual entrance examinations to remove entrance deficiencies. (See page 30 for statement concerning these examinations.)

4. **Applications of Students from Unrecognized Secondary Schools**

Graduates and nongraduates of unrecognized secondary schools may qualify for admission by examination (see page 30).

5. **Applications of Transfers**

A person who has attended another college or university of recognized standing is considered for admission to the University on presenting the following:

a. An official statement of his high school and other preparatory work;
b. An official transcript of his record in *each* collegiate institution he has attended;
c. A statement of his academic and disciplinary status at the collegiate institution from which he comes.

Students currently enrolled in another collegiate institution may apply for admission at any time after beginning their final term in that school. (See page 52 for a complete statement of regulations governing admission of transfers.)
Transfer students attending an institution on the quarter system who wish to apply for the fall semester may do so after March 1 during the winter term prior to the desired entry date, even though the winter term has not been completed and the spring term has not begun.

6. **Applications of Foreign Students**

To be considered for admission, foreign applicants must submit official records for at least the last four years of secondary school study and any university level or post-secondary school work that has been completed or attempted. All of these records must list all subjects taken, grades earned or examination results in each subject (including both passed and failed), and all diplomas and certificates awarded. If these documents are not in English, they must be accompanied by authorized English translations.

Definition of a Foreign Student

The Office of Admissions and Records is authorized to decide which students shall be classified as "foreign" according to the following definition: A person who is a citizen or permanent resident alien of a country or political area other than the United States and has a residence outside the United States to which he expects to return and either is, or proposes to be, a temporary alien in the United States for educational purposes is classified as a foreign student.

TESTING REQUIREMENTS OF FOREIGN STUDENTS

A test of competence in English is required of all foreign students, including transfers, who file applications for admission to the University of Illinois, except foreign students who are citizens of a country where the native language is English, or who have degrees from colleges or universities in countries where English is the native language and where all instruction was in English. A score on the examination must be received by the University before action is taken on the student's request for admission. All prospective foreign students who receive a score below the minimum score of acceptance on the test will not be admitted to the University. The Director of Admissions and Records may, however, upon recommendation of the college concerned, waive the requirement of the test if evidence presented by the applicant clearly justifies such action.

The Test of English as a Foreign Language (TOEFL) administered by the Princeton Testing and Advising Center, Princeton, New Jersey, has been approved for this purpose. In cases where TOEFL testing dates are not available prior to the desired term of entry, the University will arrange for substitution of the test given by the English Language Institute, Testing and Certification Division, Ann Arbor, Michigan. Complete instructions for arranging the required English test at a convenient location are sent to each applicant for whom it is required. Final admission status for these applicants is determined after the test results have been received.

If the foreign applicant is admissible, his performance on the English test will either (1) excuse him from further study of English or (2) indicate the need for additional study of English. If the results indicate that further study of English is necessary, he is required to take a Placement Test administered by the Division of English for Foreign Students of the University of Illinois prior to registration. The results of the Placement Test determine whether or not the student is required to register for one or more zero credit courses in English. If this becomes necessary, the student's program of credit courses is reduced accordingly, and a longer time may be necessary for completion of his degree requirements. (See page 152 for a statement of the English requirement for undergraduate degrees.)

General Requirements for Admission

AGE

An applicant must be at least sixteen years of age. The dean of the college concerned, however, may admit on petition a student fifteen years of age, who meets all other requirements for admission and who is to reside, while attending the University, with his parents or guardian, or with someone selected by them.

PHYSICAL EXAMINATION

Physical Examination. Each new student must present evidence of satisfactory physical and mental health to the Director of Health Services. When a permit to enter is issued to a new student, he will receive a Student Health Report form that he should take immediately to a physician of his choice. The student is responsible for insuring that the Student Health Report is completed, signed, and mailed in advance of the registration period. Admission requirements are not satisfied until the Report is received by the Office of Admissions and Records.

Tuberculosis Control. During the registration period each new, transfer, or readmitted student must (1) take a tuberculin skin test and report to the McKinley Health Center for a reading within 48 to 72 hours after application or (2) present evidence of freedom from tuberculosis as evidenced by a University of Illinois or a public health agency certificate (skin test or x-ray) dated within the last twelve months.

Persons who have a positive reading must have a chest x-ray taken by the McKinley Health Center. Persons with a history of positive reaction to tuberculin will not be skin tested but will be required to have a chest x-ray made by the Health Center. Health Center x-rays are made without charge.

Failure to comply with the tuberculosis control requirements will result in cancellation of registration.

Students transferring from the Chicago Circle or Medical Center campuses may request that their Student Health Report forms be completed by the Health Center on their campus. This physical examination report will be accepted as fulfilling the requirement.

Military personnel may have their Health Report forms completed by a base physician.

RESIDENCE CLASSIFICATION

The residence classification of an applicant is determined on the basis of the information given on his application and other credentials. Eligibility for admission to the University is determined and tuition is assessed in accordance with this decision. Errors in residence classification or assessments discovered following registration may result in adjustments of charges.

If the student believes he has legitimate cause for change of status, he may file a written claim with the Director of Admissions and Records for reconsideration. Such requests must be filed *within thirty days* from the date designated in the official University Calendar as that upon which instruction begins for the academic period for which the fee is payable. However, if nonresident tuition was not assessed on or prior to that date, the claim for refund may be filed *within thirty days* after the nonresident charge was assessed and the student was given notice of its assessment. Tuition and fees will not be refunded for that academic term because of change of residence classification if the petition is not filed within these time limits. Additional evidence to substantiate a request may be required. If the student expects to ask for a change of residence classification, it is advisable for him to request that adjustment be made prior to registration.

A student wishing to appeal the action on his claim may obtain a review of such decision by the Legal Counsel of the University by filing a written request with the Director of Admissions and Records *within twenty days* after he has been notified of said ruling. In such cases, the decision of the Legal Counsel *shall be final.*

A complete statement of regulations governing residence classification may be obtained from the Office of Admissions and Records.

SCHOLASTIC REQUIREMENTS FOR FRESHMEN

RESIDENTS AND NONRESIDENTS OF ILLINOIS

All applicants for admission are considered on the basis of a combination of their rank in their high school class and their admission test score, and the distribution of their high school subjects, as prescribed for the college and curriculum of their choice. In those programs in which applications exceed spaces available, the best qualified will be approved.

Certain curricula have established higher than the minimum scholastic requirements for admission and continuation. The Admission Chart on pages 38 to 48 and the sections in this catalog describing the various curricula provide specific information about these requirements.

For experimental and special programs, spaces may be reserved for applicants of different qualifications, not to exceed 10 per cent of the previous fall-term entering fresh-

man class. A limited number of spaces also may be reserved for applicants entering programs for which admissions decisions must be delayed.

NONRESIDENTS OF ILLINOIS

In addition to all other requirements for admission to the college and curriculum of his choice, a beginning freshman who is a nonresident of Illinois must rank at least in the top quarter of his high school graduating class.

TESTING REQUIREMENTS

DOMESTIC STUDENTS

Each student applying to the University of Illinois as a beginning freshman, except foreign students, regardless of rank in class or length of time out of school, is required to furnish to the University Office of Admissions and Records *prior to consideration of his application* scores on prescribed tests. This is in addition to other admission requirements.

The test battery administered by the American College Testing Program (ACT) is prescribed. However, an applicant may submit the Scholastic Aptitude Test (SAT) scores of the College Entrance Examination Board. If an applicant takes the test more than once, the highest score is used. Scores on either the ACT or the SAT must be in the form of an official score report received directly from the testing agency.

Students are urged to complete these admissions tests in the spring of the junior year and submit their applications and credentials as soon as possible after September 25 of the senior year to assure early consideration of their applications for admission. Test scores are required before applications will be considered. Students who have not completed the American College Test (ACT) should request a registration form from the ACT Central Registration Unit, 519 West Sheridan Road, McHenry, Illinois 60050. The Social Security number should be recorded on the ACT form.

Complete information concerning the tests, the date, and the location of testing centers may be obtained from high school counselors or principals, or by writing to the appropriate testing agency: American College Testing Central Office, Box 168, Iowa City, Iowa 52240, for the ACT; or the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540; or Box 1025, Berkeley, California 94701, for the SAT.

FOREIGN STUDENTS

Each foreign student applying for admission to the University must provide evidence of ability to understand and to speak, read, and write English effectively. Special testing requirements of foreign applicants are described on page 33.

HIGH SCHOOL GRADUATION

1. **From Accredited Secondary Schools**

   To be admitted by certificate, an applicant must be a graduate of an accredited secondary school. If the school is in Illinois, it must be fully recognized by the Superintendent of Public Instruction; if located elsewhere, its rating must be equivalent to full recognition. (For a list of sources from which credits are accepted on certification, see page 30. Conditions under which nongraduates may be admitted are given on pages 32, 37, and 76.)

2. **From Unaccredited Secondary Schools**

   Graduates of unaccredited secondary schools which offer four years of instruction are admitted by examination. The Director of Admissions and Records, however, is authorized to admit a student who is a graduate of such an unaccredited secondary school, and whose general scholarship rank is in the upper 25 per cent of his graduating class, subject to his passing at the University in advance of admission the following:

a. A test in English composition and rhetoric;
b. Such other examinations and tests in high school subjects as may be necessary to complete the University entrance requirements of the chosen curriculum. (See page 30.) High School level General Educational Development Tests and the American College Test may be substituted for the University-administered entrance examinations. (See page 31.)

3. **From Three-Year Senior High Schools**

Graduates of schools organized as three-year senior high schools, including grades ten, eleven, and twelve, must have taken at least twelve units in the senior high school. Credit earned prior to the ninth grade is accepted under the conditions described on page 30. The transcript of credits certified by the senior high school must show any credit accepted from a lower grade.

MINIMUM CREDITS REQUIRED

Applicants for admission to all curricula of the University must present at least fifteen units of acceptable secondary school work, including the following:

1. Three units in English.

2. One unit each in algebra and plane geometry (or the equivalent in college preparatory mathematics).

3. All subjects prescribed in the admission pattern specified for the curriculum which the applicant desires to enter, as stated in the chart on pages 38 to 48.

4. The remaining elective units necessary for admission to be selected from any of the high school subjects which are accepted by an accredited school toward its diploma and which meet the standards for accrediting. Fractional credits of the value of less than one-half unit are not accepted. Not less than one unit of work is accepted in a foreign language, elementary algebra, plane geometry, physics, chemistry, or biology.

The University realizes the obligation of the high school to meet fully the needs and interests of all pupils. It believes that high schools should offer courses in such fields as agriculture, art, commerce, home economics, industrial arts, and music, and it accepts them as electives for admission.

DEFINITIONS

1. **Unit.** A unit course of study in the secondary school is a course covering an academic year and including not less than the equivalent of 120 sixty-minute hours of classroom work. Two hours of work requiring little or no preparation outside the class are considered as equivalent to one hour of prepared classroom work.

2. **Academic Subjects.** The required units specified above in items 1, 2, and 3 under Minimum Credits Required may be selected from the following groups:

a. *English.* In all cases, a minimum of three units in English are required. Only courses in history and appreciation of literature, composition (including oral composition when given as a part of a basic English course), and grammar count toward the three units required for admission to all curricula.
b. *Foreign Language.* The foreign language requirement for admission to any curriculum specifying this subject is fulfilled by two units in any *one* foreign language taken in an accredited high school. Alternatively, the language requirement for admission may be fulfilled by passing entrance examinations in two units in any one foreign language which is regularly taught in the University. Less than one unit is not acceptable for admission.
c. *Mathematics.* A minimum of one unit each in algebra and plane geometry is re-

quired for admission to all curricula. Some curricula require more mathematics. General mathematics, college preparatory mathematics, or other courses in mathematics may be accepted in lieu of algebra and plane geometry or more advanced courses in cases where the content of the course is essentially the same as that ordinarily included in the required course, as determined by the Department of Mathematics at the University of Illinois. When such courses are not equivalent to the prescribed algebra and plane geometry, or more advanced courses, they will be accepted as elective credit.

d. *Science.* The subjects included in this field are astronomy, biology (or botany and zoology), chemistry, geology, and physics. (General science will not be used as a unit of required science, but will be counted as elective toward satisfying the required total of fifteen units of acceptable credit.)

e. *Social Studies.* The subjects included in this field are civics, commercial or economic geography, economics, history, psychology, and sociology.

Subject Requirements for Admission

All colleges of the University have established certain minimum specific subject requirements for admission to the various undergraduate curricula which are considered essential preparation for successful study in the chosen field. The Admissions Chart on pages 38 to 48 shows the subject pattern which has been prescribed for admission to each. The requirements are stated in units of credit.

EXEMPTIONS AND SUBSTITUTIONS

No exemptions are permitted or substitutes accepted for the high school subjects prescribed by the University or for the requirement of high school graduation, except as provided through examinations described in section 2 on page 30 and under the provisions for special admissions described below.

Except as indicated in the Admissions Chart, high school subjects required for entrance are not waived for transfers to the College of Commerce and Business Administration, to the College of Engineering, or to the College of Fine and Applied Arts, unless the transfers have demonstrated proficiency in the areas in which they are deficient.

SPECIAL ADMISSIONS

A student not otherwise eligible for admission may be admitted, with the approval of the Director of Admissions and Records and the dean of the college he wishes to enter, providing he submits evidence which clearly establishes his qualifications to do satisfactory work in the curriculum or course in which he wishes to enroll. (See also provision for attendance in University courses by Illinois high school seniors on page 76.)

Admissions Chart

Please consult page 37 for definitions and explanations of subject requirements for admission.

REQUIREMENTS FOR ADMISSION TO THE VARIOUS UNDERGRADUATE CURRICULA

(Admission quotas have been established for all curricula)

Colleges and Curricula Urbana-Champaign	Minimum		Special Requirements	Subject Pattern Required (See page 49.)
	High School Rank (Freshmen Only)	Transfer Average		
COLLEGE OF AGRICULTURE[1]				
Agricultural Science Preveterinary Medicine	Residents: Upper ½ Non-residents: Upper ¼	3.5		Pattern I
Agricultural Communications Agricultural Industries Core Curriculum,[2] with majors in: Agricultural Economics (specify option) Agricultural Mechanization Agronomy Animal Science Dairy Science General Agriculture Horticulture Food Industry Food Science Forest Science Home Economics Ornamental Horticulture Restaurant Management Wood Science	Nonresidents: Upper ¼	3.25		
Home Economics Education[3] Teaching of Agricultural Occupations (high school level)[3]			3.5 after sixty semester hours	

Combined Agricultural Science-Agricultural Engineering (five-year program)[4]	Residents: Upper ½ Nonresidents: Upper ¼	3.5		Pattern V[5]

[1] College chemistry is required in all curricula in the College of Agriculture. Electives should include the prerequisites for the beginning course. (See footnotes 4 and 5, page 204.)
[2] Transfer applicants with forty-five or more semester hours also should indicate the desired major.
[3] Continuation in this program beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).
[4] The first three years are taken in the College of Agriculture, the fourth year in either the College of Agriculture or the College of Engineering, and the fifth year in the College of Engineering. (See page 200.)
[5] Students admitted with foreign language deficiency under "Special Admission" provision must remove the deficiency within the first two years without credit toward college graduation.

INSTITUTE OF AVIATION (Two-year terminal curricula)[1]				
Aircraft Maintenance Aviation Electronics Professional Pilot	Nonresidents: Upper ¼	3.25	Personal interview Special aptitude test	Pattern I
Combined Flight-Maintenance program			Enter Aircraft Maintenance	

[1] Special physical examination required for all flight students.

Colleges and Curricula Urbana-Champaign	Minimum		Special Requirements	Subject Pattern Required (See page 49.)
	High School Rank (Freshmen Only)	Transfer Average		
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION				
Accountancy Business Administration Economics Finance Curriculum unassigned (Temporary classification for students who have not selected a degree program. Selection must be made by the end of the sophomore year.)	Nonresidents: Upper ¼	3.25		Pattern IV[1]
COLLEGE OF COMMUNICATIONS				
Advertising News-Editorial Radio-Television		3.5	Sixty semester hours of undergraduate work A reasonable degree of typing ability	

[1] Students admitted with deficiencies under "Special Admissions" provision must remove the deficiencies within the first year.

COLLEGE OF EDUCATION				
Elementary School Teaching[1] Specialty for Elementary School Librarians	Nonresidents: Upper ¼	3.5 (In some cases, applicants with averages between 3.3 and 3.5 may petition for admission on probation.)		Pattern III
General option Early Childhood Education[1]				Pattern II
High School Teaching[1] (See page 262 for areas of specialization.)			Junior standing	
Teaching of Deaf and Hard-of-Hearing Children[1]	Residents and Nonresidents: Upper ¼		Personal interview	
Teaching of Mentally Handicapped Children[1]				
Business Education[1]	Nonresidents: Upper ¼			
Technical Education Specialties (Industrial Education)[1]		3.25	3.5 after thirty semester hours	

[1] Continuation in these curricula beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).

Colleges and Curricula Urbana-Champaign	Minimum: High School Rank (Freshmen Only)	Minimum: Transfer Average	Special Requirements	Subject Pattern Required (See page 49.)
COLLEGE OF ENGINEERING				
Aeronautical and Astronautical Engineering Agricultural Engineering Ceramic Engineering Civil Engineering Electrical Engineering Electrical Engineering and Computer Science Engineering Mechanics General Engineering Industrial Engineering Mechanical Engineering Metallurgical Engineering	Nonresidents: Upper ¼	3.25		Pattern V[1]
Engineering Physics			See footnote 2 on page 43.	
Teaching of Engineering Technology[3] Electrical Technology—electronics Mechanical Technology		3.5 (3.3 to 3.5 may submit petition)		Pattern II
Post-Baccalaureate Certificate Program in the Teaching of Engineering Technology Electrical Technology—electronics Mechanical Technology (See page 318.)			Baccalaureate degree from an accredited institution Two years of pertinent industrial experience Two years of experience teaching technical courses in the respective subject-matter special field	One year of college physics Completion of integral calculus.

Combined Engineering-Liberal Arts and Sciences (five-year program) (Specify curriculum. See page 293.)	Nonresidents: Upper ¼	3.5	See footnote 4 below (Must satisfy both Engineering and Liberal Arts and Sciences requirements)	Pattern V
Combined Agricultural Science-Agricultural Engineering (five-year program)	See Agriculture.			

[1] Students admitted with foreign language deficiency under "Special Admissions" provision must remove the deficiency within the first two years without credit toward college graduation.

[2] A minimum average of 3.5 in all subjects, exclusive of basic military and physical education, and a combined average of 3.5 in all courses in mathematics and physics are required for registration in advanced undergraduate physics courses.

[3] Continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).

[4] The first, fourth, and fifth years are taken in the College of Engineering; the second and third years are taken in the College of Liberal Arts and Sciences. In general, transfer students with more than seventy-five hours of credit are ineligible for this program.

Colleges and Curricula Urbana-Champaign	Minimum: High School Rank (Freshmen Only)	Minimum: Transfer Average	Special Requirements	Subject Pattern Required (See page 49.)
COLLEGE OF FINE AND APPLIED ARTS				
Architectural Studies[1] Architecture (general and engineering options)[2]	Residents: Upper ½ Nonresidents: Upper ¼	3.25	3.25 for transfers from other departments in the University	Pattern V
Urban Planning	Nonresidents: Upper ¼			Pattern III
Landscape Architecture Dance			Qualifying audition	Pattern II
Teaching of Dance[2]			Qualifying audition 3.5 after sixty semester hours	
Art Curricula[6] General[7] Crafts Graphic Design History of Art Industrial Design Medical Art (five-year program)[4] Painting Sculpture			3.25 for transfers from other departments in the University and for continuation in art courses at the junior level (see page 332).[3] Portfolios of previous art work (see page 323).	Pattern III
Art Education[5,6]			3.5 after sixty semester hours	
Theatre Curricula Theatre: Acting Theatre: Directing and Playwriting Bases Theatre: Technology and Design				

Music, with majors in: History of Music Instrumental Music Music Composition Voice			Music qualifying audition required (see page 325).
Music Education (vocal-choral or instrumental emphasis)[5]			Music qualifying audition required (see page 325). 3.5 after sixty semester hours

[1] Four-year program for freshman and transfer students beginning an architectural program in September, 1969, and thereafter. (See page 329.)
[2] Five-year program for students who began an architectural program before September, 1969. Prospective transfers to this program should first consult the Associate Dean of the College of Fine and Applied Arts to determine their eligibility. (See page 330.)
[3] Cumulative averages for this purpose are computed by using grades for: (1) all University of Illinois courses; or (2) the combination of University of Illinois and transfer courses. The lowest average in (1) or (2) governs.
[4] The first three years are taken at Urbana-Champaign; the last two years are taken at the Medical Center in Chicago.
[5] Continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).
[6] All applicants for admission to curricula in art, except History of Art, must present a qualifying portfolio of art work.
[7] All first-year students in art curricula except those in Art Education and History of Art enter the General Curriculum. Before beginning the third year's work, a degree curriculum must be selected from those listed.

Occupational Therapy	Residents: Upper ½ Nonresidents: Upper ¼		See page 50.	
Medical Dietetics Medical Technology Medical Record Administration	Nonresidents: Upper ¼			
Pre-Professional Nursing	Residents: Upper ½ Nonresidents: Upper ¼	3.5		
Predentistry Preveterinary Medicine				
Prepharmacy	Nonresidents: Upper ¼	3.25		
Chemical Engineering Chemistry			3.5 (for juniors and seniors)	Pattern V (See footnote 7)
Physics	Residents: Upper ½ Nonresidents: Upper ¼		See footnote 4 below	
Geology		3.5	See footnote 5 below	
Combined Engineering-Liberal Arts and Sciences (five-year program)	See Engineering			

[1] See also college sections, pages *58*, *243*, and *378*.
[2] Continuation in these curricula beyond the sophomore year requires good standing or provisional status in teacher education (see page *251*).
[3] A student must maintain a 4.0 average in mathematics and a 3.75 all-University average to remain in this program.
[4] A minimum average of 3.5 in all subjects, exclusive of physical education and military, and a combined average of 3.5 in all courses in physics and mathematics are required for registration in advanced undergraduate mathematics and physics courses.
[5] After the second year, students in this curriculum must have and maintain at least a 3.5 general average, exclusive of required work in physical education. A transfer must present and maintain a corresponding record.
[6] To remain in good standing, a student in this program must have achieved a cumulative college average of at least 3.65 by the completion of his junior year. Students who desire certification for work in the public schools can complete certification requirements by completing a minor in education and completing a master's degree.
[7] It is strongly recommended that students complete three or, if possible, four years of the same foreign language before entering the College of Liberal Arts and Sciences at Urbana-Champaign.

Colleges and Curricula Urbana-Champaign	Minimum: High School Rank (Freshmen Only)	Minimum: Transfer Average	Special Requirements	Subject Pattern Required (See page 49.)
COLLEGE OF LAW				
(New students may enter only in September)		3.5 or approval of petition (See page 58.)	Law School Admission Test Bachelor's degree from an accredited four-year college or university except by special action of the Admissions Committee of the College of Law	
COLLEGE OF LIBERAL ARTS AND SCIENCES				
Sciences and Letters Curriculum, including pre-professional preparation for Communications, Law, and Medicine, with majors in the subjects listed on page 23.[1]	Nonresidents: Upper ¼	3.25		Pattern III (See footnote 7)
General (two-year program for freshmen and sophomores uncommitted to a departmental major).				
Speech and Hearing Science I (A.B. program).				
Secondary Teacher Education Curricula in Biology, Chemistry, Earth Science, English, Geography, Mathematics, Physics, Social Studies, Speech.[2]			3.5 after sixty semester hours	
Speech and Hearing Science II (B.S. program, for certification)[5]				
Teacher Education Curricula in Foreign Languages for both high school and elementary school teaching (French, German, Latin, Russian, Spanish)[2]				
Combined Sciences and Letters-Education program for Mathematics Teachers (see page 402).[3]		3.75 (4.0 in mathematics courses)	See footnote 3 below	

Colleges and Curricula Urbana-Champaign	Minimum: High School Rank (Freshmen Only)	Minimum: Transfer Average	Special Requirements	Subject Pattern Required (See page 49.)
COLLEGE OF PHYSICAL EDUCATION				
Recreation (options in general recreation, park administration, outdoor recreation, and therapeutic recreation)	Nonresidents: Upper ¼	3.25		Pattern II
Health and Safety Education[1] (options in school health education, school safety education, community health education, and public safety education)			3.5 after sixty semester	
Physical Education for Men[2]				
Physical Education for Women[2]				
COLLEGE OF VETERINARY MEDICINE				
(New students may enter only in September)		3.5	Personal interview and test scores, when requested	Sixty semester hours of acceptable credit, exclusive of military and physical education (see page 59).

[1] For those who plan to teach (School Health Education or School Safety Education option), continuation in this curriculum beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).
[2] Continuation in these curricula beyond the sophomore year requires good standing or provisional status in teacher education (see page 251).

ADMISSION SUBJECT PATTERNS

Each new applicant for admission to the University at Urbana-Champaign as a freshman or transfer must present a minimum of fifteen units of acceptable credits and must satisfy the academic subject requirements listed in one of the five following patterns, as prescribed for the college and curriculum of his choice. (Consult Admissions Chart on pages 38 through 48.)

PATTERN I	MINIMUM NUMBER OF UNITS
English	3
Mathematics[1]	
Algebra	1
Plane geometry	1
One or more units in at least three of the following:	
One additional unit in English, two units in one foreign language, science (not general science), social studies, additional mathematics (beyond algebra and plane geometry)	5
Total	10

PATTERN II	
English	3
Mathematics[1]	
Algebra	1
Plane geometry	1
One or more units in at least three of the following:	
Two units in one foreign, science (not general science), social studies, additional mathematics (beyond algebra and plane geometry)	7
Total	12

PATTERN III	
English	3
Mathematics[1]	
Algebra	1
Plane geometry	1
One foreign language[2]	2
One or more units in at least two of the following:	
Additional foreign language, science (not general science), social studies, additional mathematics (beyond algebra and plane geometry)	5
Total	12

PATTERN IV	
English	3
Mathematics[1]	
Algebra	2
Plane geometry	1
One foreign language	2
Science (not general science)	2
Social Studies	2
Total	12

PATTERN V	
English	3
Mathematics[1]	
Algebra	2

Plane geometry	1
Trigonometry	½
One foreign language[2]	2
One or more units in each of the following:	
Science (not general science), social studies	4
Total	12½

NOTES

[1] The mathematics requirement in each of the Admission Patterns may be satisfied by the prescribed courses or the corresponding number of units in College Preparatory Mathematics.

[2] It is strongly recommended that students complete three or, if possible, four years of the same foreign language before entering the College of Liberal Arts and Sciences at Urbana-Champaign. Students who have completed three years of study will have a variety of options for completing the required one semester of study in the same language in the College (see page 363). Students who have completed four years of study will have completed the foreign language requirement for a degree from that College and will not have to take additional foreign language unless majoring in a foreign language.

ADMISSION TO THE COMBINED ENGINEERING—LIBERAL ARTS AND SCIENCES FIVE—YEAR PROGRAM

Students entering this program must meet admission and graduation requirements for both colleges. Freshmen entering directly from high school are admitted to the College of Engineering. Any student entering this program directly from high school with his College of Liberal Arts and Sciences language requirement for graduation partially or completely fulfilled is required to substitute for these hours an equivalent number of hours in social sciences or humanities.

In general, students having over seventy-five semester hours of transfer work are ineligible for the combined program.

ADMISSION TO THE OCCUPATIONAL THERAPY CURRICULUM

The curriculum in occupational therapy, leading to the degree of Bachelor of Science in Occupational Therapy from the College of Medicine, is offered to men and women who are able to meet the requirements listed below. The program consists of a minimum of six semesters in the College of Liberal Arts and Sciences at Urbana and sixteen consecutive months in the College of Medicine at Chicago. A portion of it may be taken at the Chicago Circle campus or in some other accredited institution. The work on the Urbana-Champaign and Chicago Circle campuses is mainly preprofessional in character.

PREPROFESSIONAL PROGRAM

An applicant for admission to this curriculum must meet *all* the following requirements:

1. He must be a graduate of an accredited high school and meet the general requirements for admission to the sciences and letters curriculum of the College of Liberal Arts and Sciences (Pattern III);
2. He must rank in the upper 50 per cent of his high school graduating class, or satisfactorily pass examinations given by the Psychological and Counseling Center (nonresidents must rank in the upper quarter);
3. He must be under thirty years of age;
4. He must have an interview with the Head of the Department of Occupational Therapy.

All the above requirements must be certified to the Director of Admissions and Records *before* permission to enter is given. The applicant should arrange for the interview well in advance of the beginning of the semester in which he plans to enter.

TRANSFER STUDENTS

Before being eligible for admission to the professional phase of the occupational therapy curriculum in the College of Medicine, transfer students, in all but exceptional cases, must complete a minimum of two semesters in residence at Urbana-Champaign. After admission by transfer, such students are governed by the same regulations applicable to other students in the curriculum.

PROFESSIONAL PROGRAM

Requirements for admission to this part of the curriculum are given on page 64 of this catalog in the section devoted to the professional colleges at the Medical Center in Chicago.

ADMISSION OF UNCLASSIFIED STUDENTS

A person twenty-one years of age or over who is unable to meet requirements for admission as a degree candidate may be admitted to the University as an unclassified student (not a candidate for a degree) in an undergraduate college, provided he secures the approval of the dean of the college concerned. He may be required to obtain the recommendation of the instructor whose work he wishes to take. He must give evidence that he possesses the requisite information and ability to pursue profitably, as an unclassified student, his chosen subjects, and he must meet the special requirements, if any, for the particular college in which he wishes to enroll, as stated below.

No one may enroll as an unclassified student in any college of the University *for more than two years* except by special permission, application for which must be made through the dean of the college.

A person registered as an unclassified student in one college and desiring to take a course in another college of the University must obtain also the approval of the dean of the latter college.

For certain of its colleges, the University has adopted special requirements for the admission of unclassified students. These are as follows:

College of Commerce and Business Administration

The applicant must satisfy the regular entrance requirements in mathematics (two units of algebra and one unit of plane geometry) and three units of English (composition and literature).

College of Engineering

The applicant must satisfy the regular entrance requirements in mathematics (algebra, two units; plane geometry, one unit; trigonometry, one-half unit) and English (English composition and literature, three units).

College of Law

No credit earned by an unclassified student in the College of Law may be counted toward a degree in law.

College of Liberal Arts and Sciences

A written application must be presented. The applicant may be required to present official certificates including his preparatory work and showing honorable dismissal from the school last attended.

ADMISSION OF IRREGULAR STUDENTS

An "irregular" student is a person holding a bachelor's degree who wishes to continue study by registering in an undergraduate college. To be admitted to this classification, a student must obtain the approval of the dean of the college he wishes to enter.

ADMISSION TO CORRESPONDENCE COURSES

Correspondence courses are open to any applicant who can meet the University entrance requirements and also to persons eighteen or more years of age whose applications are approved by the Director of the Correspondence Study Section of the Division of University Extension. An application from a student who has been dropped from an institution of college grade will be considered only on the recommendation of the authorities of the institution from which the student was dropped. (See page 81 for information concerning acceptance of correspondence credit toward graduation and pages 37 and 76 for information concerning special and early admissions.)

ADMISSION OF LISTENERS OR VISITORS

Those wishing to attend a class as listeners or visitors must first obtain, on an official Visitor's Permit, the written permission of the instructor of the class and the approval of the dean of the college concerned. Persons registering in the University for the first time obtain the required approval from the dean of the college in which the course is offered. Former students not currently registered must obtain approval of the dean of the college in which they were last registered. Former students are not permitted to attend classes as visitors while on "dropped" status.

Visitors are *not* permitted in laboratory, military, physical education (other than theory), or studio classes. For additional information, consult the current edition of *Regulations Applying to All Undergraduate Students.*

ADMISSION BY TRANSFER

Qualified students may transfer to the University from another institution of higher learning and enter all curricula open to freshmen. They also may enter other programs which are not open to beginning freshmen. (See page 24.)

For certain undergraduate programs, spaces are severely limited for transfer applicants. Generally, transfer applicants with less than sixty semester hours are not considered for admission. However, an exception may be made for students enrolled in programs of study not offering sequential professional courses, such as advanced work in architecture. Under these circumstances the applicant may submit a statement with his application requesting an exception to the sixty semester hour requirement.

Because of the limit on available spaces, the transfer applicant is urged to follow the steps suggested on page 32 under the heading "Applications of Transfers."

General University requirements for admission by transfer, in terms of the grading system of the University of Illinois, are as follows:

1. A minimum pre-transfer grade-point average of 3.25, except that a resident of Illinois whose average is 3.0 or above, but below 3.25, may be admitted upon approval of his petition by the dean of the college he wishes to enter and the Director of Admissions and Records.

2. A nonresident of Illinois whose scholastic average is less than 3.25 will not be admitted.

Several colleges have established higher requirements for admission and continuation in certain curricula. An applicant should refer to the Admissions Chart beginning on page 38 in this catalog presenting specific admission requirements of the curriculum he desires to enter. With the exception noted below, for purposes of transfer to the University of Illinois, grade-point averages are calculated on the basis of all courses attempted for which grades are assigned, excluding grades earned in the basic instructional program of physical education. (See page 145.)

Admission of transfer students to the University of Illinois is based on only the transfer work which is of such a nature as to prepare students to continue on to baccalaureate degree programs (or equivalent programs). However, grades in other course

work completed, such as technical courses similar in content and level to courses taught at the University, may be used in evaluation for admission upon the request of the college where the work was completed and the recommendation of the dean of the college to which the student seeks admission.

(For information about scholastic and other requirements for transfers to teacher education curricula, see page 251.)

The registration of students in chemistry courses, other than those ordinarily open to freshmen and sophomores, is limited with few exceptions (students in the College of Engineering and the College of Agriculture) to those having a 3.5 general average, exclusive of the basic courses in military training and required physical education, or an average of at least 3.5 in chemistry courses. Any junior or senior who can not meet either of these requirements must petition for admittance as a major or minor in chemistry. Those who desire to register in the curricula in chemistry or chemical engineering must fulfill the former requirement to be accepted by the department as juniors or seniors. Transfer students to be admitted must have a corresponding record in the institutions from which they transfer and must maintain a similar average at the University of Illinois.

In general, it is unwise for a student to enter a specialized curriculum at the University as late as the beginning of the senior year. Students intending to transfer to the University should submit their credentials to the Director of Admissions and Records as early as possible after beginning their final term of college work preceding the desired entry date.

An applicant for admission by transfer, otherwise qualified, who is not in good academic standing at the previous institution is required to obtain approval of the dean of the college he wishes to enter at the University of Illinois. As a general policy, inter-campus transfer students are admitted on the same basis as transfer students from other accredited institutions.

In addition to satisfying the academic requirements for admission to the curriculum of his choice, a person on probation at or dropped from another institution for disciplinary reasons may enter the University only on the approval of the University Senate Committee on Student Discipline, or its designated subcommittee.

Students entering the University directly from high school as degree candidates with academic credit earned by Advanced Placement, or a similar program for superior students, and those transferring with less than twelve semester hours attempted at previous collegiate institutions are considered freshmen for purposes of admission and registration, and are not subject to the transfer regulations. *Any student who has attempted twelve or more semester hours at one or more colleges or universities, even though part has been failed, is subject to the transfer rules.* Specific admission requirements by curricula are given in the Admissions Chart beginning on page 38. (See also the statement concerning special admissions on page 37.)

READMISSION

Former students who left the University on academic dropped or undetermined status, regardless of whether or not they have attended another collegiate institution since leaving, and those who withdrew during the last three weeks of a semester or the last two weeks in a summer session or in a term, must obtain approval for readmission from the dean of the college concerned.

Former students who left the University on clear status or on probation, if they have attended another collegiate institution where they have been dropped or have earned a scholastic average below 3.0, may be readmitted to the University only upon approval of the dean of the college concerned.

Scholastic probationary status at the University of Illinois may not be cleared by attendance at another institution except by special action of the dean of the student's college.

Petitions for readmission of former students dropped for disciplinary reasons must be acted upon by the appropriate Subcommittee of the Senate Committee on Student

Discipline. Disciplinary probation at the University may not be cleared except by specific action of the appropriate Subcommittee on Student Discipline.

ACCEPTANCE OF CREDIT FROM OTHER INSTITUTIONS

In recognition of the fact that most transfer students will enter the University of Illinois after completion of two or more years at other colleges and universities in Illinois, the University is cooperating with the higher institutions in the state to attain a desirable degree of coordination of programs.

A student who has passed a course at the University of Illinois may not be given credit for the same course taken elsewhere.

In all cases, the transferred credit accepted by the University is subject to review by the students' college and major department with reference to its applicability toward a particular degree, and the student is expected to conform to all the requirements of his chosen curriculum.

The Director of Admissions and Records, on application, will furnish complete information regarding acceptable sources of transferred credit.

ACCREDITED INSTITUTIONS

Credits may be accepted for advanced standing from another accredited university or college.

In general, except as indicated on page 52, the University of Illinois accepts on an hour-for-hour basis credit as shown on official transcripts of record received directly from other fully accredited collegiate institutions which have been approved by one of the regional accrediting associations, including those classified by the regional accrediting association as "Recognized Candidates for Accreditation" and those approved for "correspondent" status. Students from degree-granting institutions not in one of these categories, but which have been accredited or approved by one of the agencies recognized by the National Commission on Accrediting, also may be allowed credit for work transferred to the University in courses which are substantially equivalent to courses offered at the University of Illinois.

A student transferring from a recognized collegiate institution who has been allowed credit for the Advanced Placement Program by that institution, and such credit is so certified on the official transcript of credits, is allowed credit by the University of Illinois in the same amount as accepted by the previous institution.

PROVISIONALLY ACCREDITED INSTITUTIONS

Credits from schools with provisional accreditation are accepted on the basis of validation by satisfactory completion of additional work in residence. Validation through satisfactory work in residence may be accomplished by earning in the University of Illinois or other fully accredited collegiate institution at least a 3.0 ("C") average, or higher if prescribed by the curriculum the student wishes to enter, in the first fifteen to thirty semester hours completed thereafter.

Any semester in which the student completes his first fifteen semester hours, or any number of semester hours between fifteen and thirty inclusive, with the required average is accepted as validating the transferred credit. In all cases, the grades for all work attempted in the validating period are counted in computing the average. Except as provided below, such credits not validated within the first thirty semester hours can then be validated only by proficiency examinations.

For students who have already completed their residence requirement for graduation (see page 151), validation of subsequent Class C credits may be considered satisfied by the previous work in residence at the University.

Upon approval of the student's petition by the dean of his college and the Director of Admissions and Records, credits earned in any subject area are accepted after suc-

cessful completion (with grades of "C" or better) of six semester hours or nine quarter hours of higher level courses in the same subject matter field at the University, even though a 3.0 ("C") or higher average was not achieved in the first fifteen or thirty semester hours, or their equivalent, in residence.

UNACCREDITED INSTITUTIONS

Credit from unaccredited institutions is accepted only on the basis of validation by proficiency examination at the University of Illinois after enrollment.

JUNIOR COLLEGES

Conditions governing acceptance of credit from four-year collegiate institutions also apply to junior colleges.

Credit transferred from an accredited junior college is limited only by the provision that the student must earn at least sixty semester hours required for the degree after attaining junior standing at the University of Illinois or at any other approved four-year institution, except that the student must meet the residence requirements for a degree from the University. Any request for exception to this rule in individual cases must be submitted to the dean of the student's college for decision. When a school or college requires three years of preprofessional college credit for admission, at least the last thirty semester hours of preprofessional credit must be earned in an approved four-year collegiate institution.

Credits earned at a junior college which has not been accredited by the North Central Association, but which has been given a Class 1 rating and is recognized by the Illinois Junior College Board, will be accepted without validation for a period of time not to exceed five years from the date on which the college registers its first class after achieving Class 1 status. The five-year period provides the normal amount of time necessary to acquire accreditation by the North Central Association.

Credits earned in newly founded institutions granted "Correspondent" status by the North Central Association of Colleges and Secondary Schools will be accepted without validation for a period of two years, during which the institution should acquire "Recognized Candidate for Accreditation" status, or membership in the Association.

The scholastic average of a student applying for admission to the University by transfer from a junior college is computed on the same basis as for transfers from a four-year institution (see pages 52 and 144). The status of such a student and the specific credits acceptable toward his degree are determined by the dean of the college he wishes to enter.

TRANSFER TO AND FROM THE CHICAGO CIRCLE CAMPUS

The University of Illinois at Chicago Circle offers the first one or more years of work in the fields listed on page 18. Course offerings are gradually being increased to full undergraduate and graduate programs.

Students who wish to transfer between campuses are subject to the same academic requirements and limits of facilities imposed upon applicants for transfer from outside the University, and credits earned at the prior campus are counted in the transfer average. (See page 151 for residence requirement for graduation.)

Applications for transfer may be initiated at the Office of Admissions and Records on either campus of the University. Students who request transfer from one campus of the University to another are also subject to the same advance deposit regulations applying to other students. (See page 137.)

Students transferring to the Urbana-Champaign campus from Chicago Circle may be required to submit official transcripts of college work completed at other institutions in order to assure maximum allowance of transferred credit toward the Urbana-Champaign degree.

ADMISSION AND READMISSION TO THE SUMMER SESSION

In addition to a two-semester academic year, the University conducts an eight-week summer session at Urbana-Champaign to accommodate the needs of those whose employment prevents attendance during the regular school year, as well as graduate students pursuing work leading to advanced degrees or specialized study, undergraduate students at the University of Illinois or elsewhere who wish to accelerate their programs, and other persons for whom summer study will contribute to vocational or personal goals. All colleges on the Urbana-Champaign campus participate in the summer program. A few departments offer special intensive courses lasting only four to six weeks. The College of Law offers two five and one-half week sessions, and several special twelve-week programs are given.

Because existing academic facilities are inadequate to accomodate all qualified applicants for admission and readmission in the fall semester, acceptance in the summer session does not guarantee approval for continuation in the following semester unless the applicant has previously been approved for admission as a candidate for a degree and has paid an advance deposit on his tuition and fees for the fall semester. New students who wish to enter in the summer session and continue in the following fall should indicate this at the time of application.

Undergraduate students enrolled on campus in the immediately preceding spring semester who did not withdraw and wish to remain in the same college need not apply for admission to the summer session. All other undergraduates who do not plan to continue in the following fall should apply for admission or readmission as soon as possible after March 1.

A student who has been dropped and is being considered for continuance "for summer session only" is required to consult with an official of the college from which he was dropped and also with an official of the college in which he intends to be readmitted at a future date. (This may be the same or another college.)

A student who is approved for such continuance must petition the college for readmission in a subsequent semester or session.

CANDIDATES FOR DEGREES

ADMISSION

All freshman students not previously enrolled at the University of Illinois who are planning to register for the first time in the summer session and to continue *as degree candidates* in the fall should submit applications for admission and complete credentials to the Director of Admissions and Records as soon as possible after September 25. Applications will be accepted on or after March 1 from new transfers who plan to continue in the fall. Application blanks may be obtained by writing to the Office of Admissions and Records, University of Illinois, 100a Administration Building, Urbana, Illinois 61801.

New freshman and transfer students applying for admission in the summer session as candidates for degrees must satisfy the same admission requirements of the chosen curriculum which are prescribed for students entering for the first time in a fall or spring semester, including testing requirements described on page 35. They are not however, required to make an advance deposit on summer session tuition and fees, and the deposit made for the fall cannot be applied on the summer session charges. Such students, if qualified, will be admitted directly to the college and curriculum of their choice. Consult the chart on page 38 for information concerning requirements for admission to the various curricula.

All applications from beginning freshmen for admission to the University in the summer session as candidates for degrees are considered, as in a semester, on the basis of a combination of high school rank and scores on prescribed admission tests, and distribution of academic subjects prescribed for the chosen curriculum. (Either the ACT or the SAT or the CEEB have been approved for admission test purposes.)

Nonresident freshmen must rank at least in the top quarter of their high school graduating class, and nonresident transfers must present a cumulative scholastic average of at least 3.25, in terms of the University of Illinois grading system. Some curricula require a higher average.

READMISSION

All former undergraduate students not in attendance the immediately preceding second semester who expect to return in the summer session should file applications for readmission as soon as possible after March 1 in order to allow ample time for preparation of registration materials. This facilitates the entire procedure for each student concerned and avoids unnecessary delay in completing his registration.

Former students are considered for readmission to the college in which they were previously enrolled, if in good standing at the last attendance, unless they request transfer to another college or to the Summer Session with non-degree status. In such cases, they must obtain releases from their former colleges. Former students not in good standing must petition for readmission to the University in their former colleges, another college, or the Summer Session.

NON—DEGREE CANDIDATES

Undergraduate applicants for admission or readmission to the University in the Summer Session, *not as candidates for degrees,* are not assigned to any college or curriculum, and they are not required to submit test scores prior to determination of eligibility to enter. Their applications should be submitted to the Office of Admissions and Records as soon as possible after March 1. They may be approved by the Director of Admissions and Records or by the Summer Session Office for enrollment in the Summer Session under one of the following conditions:

1. High school graduates who qualify for admission under minimum admission requirements but who have not been admitted for the fall semester may be admitted to the Summer Session only as non-degree candidates. Nonresident applicants must rank at least in the top quarter of their class. (Students who have received permission to enter in September and who wish to enroll in the summer will register in their colleges at the beginning of the summer session.)

2. Former University of Illinois students who have not graduated from the University may register as non-degree candidates if they secure a release from the college at the University of Illinois in which they were last enrolled, and if such enrollment is approved by the Director of Admissions and Records or by the Summer Session office.

3. Undergraduate students enrolled in other institutions may enroll in the Summer Session as non-degree candidates if they present a statement of eligibility to return to the collegiate institution last attended.

4. Persons employed as teachers who submit statements from the school authorities attesting to their employment may enroll in the Summer Session as non-degree candidates.

5. Other persons, twenty-one years of age or over, who have never attended a collegiate institution but give evidence that they possess the requisite background and ability to pursue profitably courses for which they are qualified, may enroll in the Summer Session as non-degree candidates.

Students on drop or probationary status must petition the Summer Session Office for admission as non-degree candidates. If approved, they will be admitted on probation for that one summer session only.

Approval of admission or readmission as a non-degree candidate in the Summer Session in no way affects a student's future standing in a college, and satisfactory performance is no assurance of approval for continuation in the fall or at any future

time. Students admitted to the Summer Session as non-degree candidates who later wish to enter one of the colleges of the University as degree candidates must seek admission in the usual manner and satisfy requirements in effect at the time of application.

All students holding a bachelor's degree must enroll in the Graduate College with the exception of applicants admitted as irregular students (see page 51).

ADMISSION TO THE PROFESSIONAL COLLEGES AT URBANA-CHAMPAIGN

The professional colleges of Law and Veterinary Medicine are located on the Urbana-Champaign campus of the University. Both require specified amounts of preprofessional study prior to admission, and new students may enter only in September.

Because existing academic facilities limit the number of qualified applicants which may be accommodated, quotas have been established in both colleges. Applications and complete credentials, accompanied by the $15.00 nonrefundable application fee, should be submitted as early as possible after the beginning of the eighth semester or eleventh quarter of preprofessional study prior to the fall semester in which admission is desired.

Specific requirements for admission and application deadlines are given below:

College of Law

Applications for admission must be made on forms which may be obtained from the Office of the Dean of the College of Law. In addition to filling out this application, each applicant should register with the Law School Data Assembly Service (LSDAS) and should request the registrar of each institution he has attended to send an official transcript directly to: LSDAS, Educational Testing Service, Box 944, Princeton, New Jersey 08540. Blanks for registering with the Service may be obtained from the Service or from the College of Law. There is a minimum fee of $5.00 for registering with the Service, with an additional fee for each law school to which a report is made. The LSDAS will analyze the transcripts and scores on the Law School Admission Test and send a report to the College of Law. An applicant who will receive his baccalaureate degree from the University of Illinois, Urbana-Champaign campus only, may elect not to register with the LSDAS. Minimum requirements for admission are:

1. A scholastic average of 3.5 (midway between "B" and "C") in terms of the University of Illinois grading system in all college work taken. However, an applicant whose grade average is somewhat below 3.5 may be admitted if his score on the Law School Admission Test and any other available information indicate high aptitude for the study of law.

2. A satisfactory score on the Law School Admission Test. This test is given at various centers in the United States by the Educational Testing Service. Applications for the test and a bulletin of information giving the dates and location of the tests are available at the College of Law and by writing directly to the Educational Testing Service. In 1970–71 the tests were given five times, in October, December, February, April, and July. Applicants are urged to take the test no later than February of the year of admission. Arrangements should be made with the Educational Testing Service, Box 944, Princeton, New Jersey 08540. Test results will be reported directly from the Testing Center to the College of Law. Completed applications for the test and $13.50 in payment of the required fee must be received in the office of the Educational Testing Service, not later than three weeks before the date of each test.

3. A degree from an approved undergraduate college. Upon application by a prospective student, the degree requirement may be waived by special action of the Admissions Committee of the College of Law. *All* applicants must submit final transcripts of all undergraduate work and certifications of degrees prior to registration in September. Letters of recommendation are not necessary and will not be considered.

In order to have the best chance for admission, the completed application should be received by the college no later than March 15 prior to the beginning of the fall term to which admission is requested. Completed applications received after March 15 will be considered by the Admissions Committee so long as space remains in the September entering class, and the best qualified applicants will be assigned to the spaces which remain, if any.

The College of Law has no specific prelegal course requirements for admission, but the prospective law student should choose his prelegal subjects so as to achieve a well-rounded general education. He is advised to consult with the Psychological and Counseling Center of the University, relative to his interests and aptitudes for law, and with members of the College of Law faculty in regard to his plans.

The degree of Juris Doctor (J.D.) is conferred on those students who complete satisfactorily the required three years of professional study, comprising a minimum of ninety semester hours.

College of Veterinary Medicine

Applications and complete credentials are accepted on or after October 1 and must be received in the Office of Admissions and Records no later than March 1 prior to September admission.

Preveterinary medical students may register in the College of Agriculture or the College of Liberal Arts and Seciences. Equivalent preveterinary instruction may be taken at other accredited institutions. However, preveterinary medical training does not automatically guarantee admission to the College of Veterinary Medicine.

Applicants for admission to the college must present not less than sixty semester hours of acceptable credit from a recognized college or university. Hours earned in military training or physical education are not counted in this total. The minimal acceptable grade-point average is 3.5, in terms of the University of Illinois grading system, or the equivalent as determined by the University for institutions using a different grading system. In the University of Illinois system, 3.5 is midway between "B" and "C." The sixty semester hours must be distributed as follows:

	HOURS
Chemistry (including organic and quantitative analysis)	16
Biological Science (biology, including botany and general zoology)	8
Physics (including laboratory)	8
Foreign Language[1]	6
English Composition and Rhetoric	6
Electives	16
Total	60

ALTERNATIVES:[2] (FOR A TOTAL OF 16 SEMESTER HOURS)

ELECTIVE OPTION A

Social Science Sequence courses[3]	6
Humanities Sequence courses[3]	6
Free electives	4
Total	16

OR

ELECTIVE OPTION B

Electives in not less than two of the following fields: anthropology, economics (including agricultural economics), fine arts, language, geography, history, literature, philosophy, political science, psychology, sociology, speech. Approximately one-half of these credits must be in the following fields: anthropology, economics, geography, history, political science, psychology, or sociology	9
Free electives	7
Total	16

NOTES

[1] The foreign language requirement may be fulfilled by three years of one foreign language from an accredited high school or by demonstrating competency equivalent to one year of foreign language at the college level. Competence may be demonstrated by placement examinations or by successful completion of the second semester of the language.

[2] Students whose preveterinary elective courses satisfy the requirements of either Option A or Option B may be admitted to the professional program. However, only students who complete Elective Option A are eligible to receive the degree of Bachelor of Science in Veterinary Medicine. Students admitted under Elective Option B who wish to receive the bachelor's degree must take appropriate courses outside the professional curriculum to satisfy Option A requirements. Because of the heavy prescribed course load in the professional curriculum, these additional courses usually must be taken during the summer session.

[3] These courses are part of the General Education Sequences required for obtaining the bachelor's degree from the University of Illinois. See page 154. Specific courses which may be counted as General Education Sequences are listed in this catalog under the degree requirements of either the College of Agriculture or the College of Liberal Arts and Sciences.

Limitation of enrollment of students in the professional college curriculum is mandatory because of limited facilities. In selecting students for admission, scholarship in preveterinary medical subjects and character references are considered. Aptitude testing, general and professional, together with personal interviews, also serves in the careful screening of students. Preference is given to residents of Illinois and to Illinois service veterans.

Students who have completed Elective Option A and have passed all courses of the first two years of the veterinary medical curriculum and who have an average of 3.0 or better in these courses are eligible for the degree of Bachelor of Science (B.S.) in Veterinary Medicine.

Students who have passed all courses in the four-year veterinary medical curriculum and who have an average of 3.0 or better in these courses are eligible for the degree of Doctor of Veterinary Medicine (D.V.M.).

ADMISSION TO THE PROFESSIONAL COLLEGES AT THE MEDICAL CENTER IN CHICAGO

The following material offers undergraduate students a brief view of requirements for entering the University's professional colleges in Chicago. Details concerning the preprofessional curricula are given on pages 378 to 384 in the College of Liberal Arts and Sciences section and on page 338 of the College of Fine and Applied Arts section of this catalog. Further information may be obtained by writing the Office of Admissions and Records at the University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

Because space limits the number of enrollments at the professional colleges, applications and complete college credentials should be sent as early as possible within stated time limits to the Office of Admissions and Records, P.O. Box 6998, Chicago, Illinois

60680. These time limits are indicated below. The professional colleges operate on the quarter system, and with the exception of the curricula in Medical Technology and Medical Record Administration which begin in June, new classes enroll in September.

Applicants are selected on the basis of individual qualifications. Preference is given to Illinois residents. Consideration is given to scholastic records, schools and colleges attended, letters of recommendation, health records, aptitude tests, personal characteristics, and such special examinations and other qualifications as may be determined by the committees on admissions. All grades in all subjects presented, including repeated courses, except health education, physical education, and military science, are counted in calculating the average.

Applicants must present evidence that course and grade average requirements will be met in full. Applicants for admission to those curricula requiring three years of preprofessional college credit who present credit from a junior college must have completed at least the last thirty hours of preprofessional work in a fully accredited four-year collegiate institution. No applicants are considered who are on scholastic probation or who, because of poor scholarship, were dropped from the last institution they attended. Invitations to register are sent to approved applicants.

College of Dentistry

Applications for admission must be received between July 1 (fourteen months preceding enrollment) and March 15 (prior to September enrollment). Minimum requirements are:

1. A scholastic average of at least 3.25 ("C+") on the University of Illinois grading system.

2. Two years of work in an approved college of liberal arts and sciences, comprising not less than sixty semester hours, including these prescribed subjects:

	SEMESTER HOURS
Chemistry (including at least four hours of organic)	14
Physics	6
Biology (including general zoology)	6
English (composition and rhetoric)	6
Electives (excluding health education, military, and physical education)	28
Total	60

Urbana-Champaign courses which satisfy the above requirements are given on page 380 of this catalog.

All applicants meeting other requirements for admission must take the Academic and Manual Aptitude Tests sponsored by the Council on Dental Education of the American Dental Association and the American Association of Dental Schools no later than January of the year they wish to enter.

At the close of the second year a student whose grades in the College of Dentistry are satisfactory, and who is qualified on the basis of his predental work, may apply for the degree of Bachelor of Science in Dentistry. For this degree, at least six semester hours in French, German, Italian, Russian, or Spanish; eight semester hours in biology; and six semester hours of electives (excluding chemistry, physics, and biology) must be included in the predental work.

The degree of Doctor of Dental Surgery is awarded upon completion of the four-year curriculum in dentistry.

College of Medicine

CURRICULUM IN MEDICINE

The College of Medicine has reorganized into a series of semi-autonomous schools of medicine within one college. All students will be admitted through application to the College Admissions Committee, through the Office of Admissions and Records at the Medical Center, Chicago. Students accepted to enroll in September, 1971, will be offered a place in the School of Basic Medical Sciences at the Medical Center in Chicago or, for a small number, in the new School of Basic Sciences at Urbana. These students will proceed to a three-year clinical school curriculum in 1972 in either the Abraham Lincoln School of Medicine at the Medical Center in Chicago or, for a lesser number, the Peoria School of Medicine or the Rockford School of Medicine.

Applications must be received between July 1 (fourteen months preceding enrollment) and December 31 (prior to September enrollment).

A personal interview may be required at the discretion of the Admissions Committee, and an interview is arranged for any applicant who requests it.

The degree of Doctor of Medicine is awarded upon completion of the four-year curriculum in medicine.

Students seeking admission to the Curriculum in Medicine must:

1. Demonstrate, in addition to academic achievement, the emotional maturity, the integrity, and the motivation judged necessary for the successful study and practice of medicine.

2. Have received a baccalaureate degree (ordinarily A.B. or B.S.) from a recognized college or university or be eligible to receive such a degree upon satisfactory completion of the curriculum of the first year in the College of Medicine. Students from colleges that do not grant a degree after the satisfactory completion of the first year of medicine may be considered for admission after satisfactory completion of three years (not less than ninety semester hours exclusive of health education, basic military, and physical education) of college work if such students are eligible for full senior status in that college. (Full senior status means eligibility to receive a baccalaureate degree after completion of the senior year.)

   The undergraduate program must include as a minimum:

   Biology: A full year's course at college level in biology (usually animal) with appropriate laboratory work. This course should emphasize the cellular and molecular aspects as well as the structure and function of living organisms.

   Chemistry: Two years of college chemistry divided about equally between organic and inorganic. Laboratory work and familiarity with quantitative techniques are important aspects of this experience.

   Physics: One full year of college credit in physics (with laboratory experience).

   The college major should be in the field that the student finds most interesting. If he chooses a division of science, he should try to get as broad an experience in the humanities as feasible. If he chooses the humanities, he should be certain to include the minimum science requirements but not necessarily limit himself to these minima. The College of Medicine would expect some studies but not require specific sequences in English and foreign languages. Mathematics through calculus is recommended. Psychology and sociology are examples of studies that are of value in the understanding of behavior and will complement studies both in the sciences and humanities.

3. Have obtained a satisfactory score on the Medical College Admission Test.

School of Associated Medical Sciences

The School of Associated Medical Sciences, established within the College of Medicine, administers the following five curricula:

CURRICULUM IN MEDICAL ART

Applications must be received between October 1 and March 1 (preceding September enrollment). In any one year, the number of applicants for admission to the final phase of this curriculum is restricted to six. Minimum requirements are:

1. A scholastic average of at least 3.5 (midway between "B" and "C") in terms of the University of Illinois grading system.

2. Three years of work in the College of Fine and Applied Arts, completing a minimum of ninety-five semester hours of acceptable credit, exclusive of physical education and military training, and including the courses prescribed in the preprofessional curriculum announcement in the College of Fine and Applied Arts section on page 338 of this catalog.

In addition, each prospective student is required to submit in person a portfolio demonstrating such techniques as pen and ink drawings, water colors, life drawings, etc. The first half-year is a probation period for all accepted students.

The degree of Bachelor of Science in Medical Art is conferred by the College of Medicine after completion of the fourth and fifth years of the program in the Curriculum of Medical Art at the Medical Center in Chicago.

CURRICULUM IN MEDICAL DIETETICS

Applications for admission must be received between October 1 and March 1 (preceding September enrollment). September 1972 enrollment will be limited to six students. Minimum requirements are:

1. A scholastic average, in terms of the University of Illinois grading system, of at least 3.0 ("C") if earned at the University of Illinois or a minimum of 3.25 if transferred from other colleges or universities.

2. Two years of preprofessional work comprising a minimum of sixty semester hours, exclusive of physical education and basic military training, and including the following:

   Rhetoric or Verbal Communications: Two semesters.
   Biological Sciences: One year of biology and one course in microbiology.
   Humanities: An approved general education sequence.
   Physical Sciences: Chemistry through organic; one course in mathematics (College Algebra).
   Social Sciences: An approved general education sequence; one course in economics.

The Committee on Admissions to the third year of the curriculum in medical dietetics selects applicants on the basis of scholastic record and aptitude. The Committee includes representatives from the College of Medicine, the College of Liberal Arts and Sciences, and the Office of Admissions and Records.

The general requirements for graduation in medical dietetics include general education sequences in the biological, physical, and social sciences, and in the humanities. Since humanities and social sciences sequences are not available at the Medical Center, students are advised to include these courses in their preprofessional work.

Interested students should consult Professor Nelda Alger, 549 Morrill Hall, for information concerning the courses offered on the Urbana-Champaign campus which satisfy the preprofessional requirements for admission to the professional phase at the Medical Center.

The degree of Bachelor of Science in Medical Dietetics is awarded by the College of Medicine upon completion of the two-year professional phase of the curriculum at the Medical Center campus in Chicago.

CURRICULUM IN MEDICAL RECORD ADMINISTRATION

Applications for admission must be received between October 1 and March 1 (preceding June enrollment). Minimum requirements are:

1. Three years of preprofessional study in the College of Liberal Arts and Sciences with a minimum of ninety semester hours, exclusive of physical education and basic military, and including the subjects specified in the preprofessional curriculum given on page 379.

2. A minimum scholastic average of 3.0 ("C"), in terms of the University of Illinois grading system if taken at the University of Illinois, and 3.25 if taken at other colleges and universities.

The degree of Bachelor of Science in Medical Record Administration is conferred by the College of Medicine upon satisfactory completion of the professional phase during the fourth and final year (twelve months) of the program in that college.

CURRICULUM IN MEDICAL TECHNOLOGY

Because of limited facilities at the College of Medicine, it is not possible to guarantee admission to the professional phase of this program for all who complete satisfactorily the three-year preprofessional program. Therefore, it is wise for students in this curriculum to so arrange their studies that an alternative goal may be realized.

Applications for admission must be received between October 1 and March 1 (preceding June enrollment). Minimum requirements are:

1. A scholastic average of at least 3.0 ("C"), in terms of the grading system of the University of Illinois if taken at the University of Illinois, and 3.25 if taken at other colleges or universities.

2. Three years of preprofessional work in the College of Liberal Arts and Sciences comprising a minimum of ninety semester hours, exclusive of physical education and basic military, and including the subjects listed in the preprofessional curriculum given on page 379 of this catalog.

The degree of Bachelor of Science in Medical Technology is conferred by the College of Medicine upon satisfactory completion of the fourth and final year (twelve months) of the program in that college.

CURRICULUM IN OCCUPATIONAL THERAPY

Applications for admission to the professional portion of this curriculum must be received between October 1 and March 1 (preceding September enrollment).

This curriculum, open to both men and women, leads to the degree of Bachelor of Science in Occupational Therapy, conferred by the College of Medicine.

The first six semesters of this prescribed collegiate curriculum which precede registration in that portion of the course offered at the College of Medicine may be taken in the College of Liberal Arts and Sciences at Urbana-Champaign. A portion of it may be taken at the Chicago Circle campus or in other accredited institutions.

A minimum of ninty semester hours of acceptable credit, exclusive of basic military and physical education, with a cumulative scholastic average of at least 3.5 is required before transfer to the Medical Center in Chicago where the final phase of instruction in this curriculum is offered during a period of sixteen consecutive months. For specific subject requirements in this program, refer to the preprofessional curriculum in the College of Liberal Arts and Sciences section on page 380 of this catalog.

College of Nursing

Applications for admission should be submitted as soon as possible after January 1, but no later than September 1.

The professional part of the collegiate nursing program leading to the degree of Bachelor of Science in Nursing consists of approximately three years. Single and married men and women are eligible for consideration.

Minimum requirements for admission to the professional phase are:

1. Two semesters of preprofessional work in liberal arts and sciences, comprising not less than thirty-two semester hours, excluding health education, military science, and physical education, and including the following:

	SEMESTER HOURS
Rhetoric and Composition	6
Chemistry, including organic	6
Zoology or General Biology	4
Humanities	6
Introductory Psychology	3
Introductory Sociology	3
Electives (excluding health education, military science, and physical education)	3
Total	31

2. A grade-point average in all college work attempted of at least 3.00, including not less than "C" in biology or zoology and chemistry.

3. An interview with a representative of the College of Nursing faculty, entrance examinations, and other evidence of suitability for professional nursing may be required prior to approval of admission.

Courses offered on the Urbana-Champaign campus which satisfy the above minimum requirements are listed on page 382 of this catalog.

College of Pharmacy

The curriculum in pharmacy leading to the degree of Bachelor of Science in Pharmacy consists of one year of preprofessional work in the College of Liberal Arts and Sciences at Urbana-Champaign or at the Chicago Circle campus, or in other accredited collegiate institutions, followed by four years in the College of Pharmacy at Chicago. Applications for admission should be submitted between January 1 and September 1 (preceding September enrollment).

Minimum requirements for admission to the College of Pharmacy are:

1. Graduation from an accredited secondary school, or equivalent preparation.

2. Two semesters of work in an accredited college, junior college, or university, comprising not less than thirty semester hours (or forty-five quarter hours) of academic credit, exclusive of health education, physical education, and military science. Credits submitted must include the following:

	SEMESTER HOURS
Inorganic Chemistry	8
College Algebra	3
Plane Trigonometry	2
English (composition and rhetoric)	6
Electives (excluding courses offered in the College of Pharmacy)	11
Total	30

3. Applicants entering from institutions other than the University of Illinois must have a grade-point average of at least 3.25 in terms of the grading system of the University of Illinois.

4. Students entering the College of Pharmacy from other colleges within the University of Illinois must be eligible for continued registration in that college.

An applicant who is otherwise qualified but whose grade-point average for his last semester is less than 3.0 is admitted on a probationary status. Students who have been dropped for poor scholarship at the last institution they attended are not eligible for admission to the College of Pharmacy.

A student may apply for admission and receive advanced standing in the professional curriculum for the completion of any or all of the following courses offered at the Urbana-Champaign campus or equivalent courses at the Chicago Circle campus.

	SEMESTER HOURS
Chemistry 134 and 136, 336, and 337	10
Physics 101 and 102	10
Mathematics 120	5
Accountancy 101	3
Economics 102 or 108	3

If all are completed, enrollment for a summer session at the College of Pharmacy in Pharmacy 110 and Pharmacy 112 will complete the requirements of the first professional year.

PRE–COLLEGE PROGRAMS FOR ENTERING STUDENTS

Pre-College Programs for Freshmen

The University offers to high school seniors planning to enroll at the Urbana-Champaign campus in September a coordinated series of pre-college programs including advance guidance testing, placement and proficiency testing in numerous subjects, pre-college counseling, advance enrollment, and orientation for parents. Almost all new freshmen participate in these programs, but for those unable to do so, the tests and other essential portions are repeated during the New Student Program immediately preceding registration. These activities are described in the *Official Program for New Students* which is sent to all new students after payment of their advance deposit on tuition and fees.

A special bulletin entitled *Pre-College Programs for Entering Freshmen,* describing in detail each of the programs and including a form for students to use in requesting participation in one or more of the programs, is sent to each entering freshman with his notice of eligibility for admission. Arrangements include the following:

1. **Guidance, Placement, and Proficiency Testing**

   The Psychological and Counseling Center makes this testing available during the spring and summer at eight different locations over the state on a series of Saturdays between February and June. Each day's schedule includes Freshman Guidance Examinations, the Rhetoric Placement and Proficiency Examination, the Mathematics Placement Test, the Chemistry Placement Test, and the Foreign Language Placement and Proficiency Examinations for those students presenting high school credit in French, German, Latin, Russian, and Spanish for admission. All these tests supplement, but do not replace, the admission test (ACT or SAT) required of all beginning freshmen which is described on page 35; they are not used in determining eligibility for admission to the University, but the results are used in ar-

ranging the academic program. A ticket of admission to the testing session of the student's choice must be obtained in advance.

2. Pre-College Counseling

To insure, insofar as possible, that each new student will be able to make the best possible use of the educational opportunities provided by the University, the Psychological and Counseling Center offers individualized counseling interviews to all entering freshmen who have taken the Freshman Guidance Examinations. A special Self-Counseling Manual is given to each freshman who has completed the Freshman Guidance, Placement, and Proficiency Examinations. With the aid of this Manual, the student and his parents are able to understand the results of the tests and enabled to answer most of the questions freshmen commonly have. If individual counseling interviews are indicated, they are available on the Urbana-Champaign campus by appointment during April through July. To be of maximum value, particularly for students who are uncertain about their educational objectives, pre-college counseling should be arranged several weeks before advance enrollment. This provides an opportunity to effect a change in college and/or curriculum prior to selection of academic courses, if such a change is indicated as desirable.

3. Advance Enrollment

Freshmen who have completed the Freshmen Guidance Examinations and those placement tests required for their curriculum, and have submitted an advance deposit on their tuition and fees (see page 137), may advance enroll in their first semester courses. Advance enrollment for the fall semester is individually scheduled on the Urbana-Champaign campus in the summer during June and July. The results of the placement and proficiency tests are used by the academic adviser when arranging the student's program of studies. (See page 70 for a statement concerning advance enrollment of other students.)

4. Parents Program

Under the co-sponsorship of the Dads Association, the Mothers Association, and the University, a special program is arranged concurrently with the advance enrollment period to provide opportunities for parents who accompany their sons and daughters to learn more about the University and the Urbana-Champaign community during their day on campus.

FRESHMAN GUIDANCE EXAMINATIONS

Freshman Guidance Examinations, the School-College Ability Test, the Kuder Interest Inventory, and the Cooperative Reading Test are required of all new students, except foreign students, entering the University directly from high school, including those degree candidates with college credit earned through Advanced Placement and similar programs for superior high school students, and those entering with less than twelve semester hours of academic credit earned in another college or university. These examinations are conducted by the Psychological and Counseling Center and are intended to assist students to make wise educational and vocational decisions, both in and beyond college. The results are also made available to the dean of the student's college.

These tests are offered at various times and places during the spring and summer, and during the New Student Program preceding registration each semester. Information concerning dates and locations of testing centers may be obtained by writing to the Office of Admissions and Records. Students are strongly urged to take advantage of the opportunity to complete these tests during the spring or summer so that they may receive early counseling.

ACADEMIC TESTING

BIOLOGY PLACEMENT AND PROFICIENCY EXAMINATION

All new students entering biological science curricula or other curricula which require one or more preprofessional courses in biology should take the chemistry place-

ment test during the advance testing period in the spring and summer or in the fall during the New Student Program.

Students in the above curricula: (1) who have an adequate background in high school biology (usually two years), (2) whose chemistry placement test results indicate that they do not need to take Chemistry 100, and (3) whose admission credentials show no college credit in a biological science will be encouraged to take the biology placement and proficiency examination during the New Student Program in the fall. All other students whose chemistry placement test results indicate that they may enroll in Chemistry 100 during the fall semester and who do in fact enroll in one of those courses should take the biology placement and proficiency examination after completion of that semester course.

The results of the examination will enable the department concerned to evaluate each student's achievement level and assist him as he arranges his schedule of courses. Moreover, if he does well on the examination, he may receive proficiency credit, depending upon his major field of study, and in accordance with the level of his performance on the test.

CHEMISTRY PLACEMENT TEST

All new students who have had high school chemistry and who are entering curricula which require one or more courses in chemistry, and those who plan to take chemistry as an elective, and whose admission credentials do not include college credit in chemistry, must take this test. The results are essential to placement in the proper chemistry course.

Participants in the Advance Enrollment Program should take this test on the same day that they take the Freshman Guidance Examinations in the spring or early summer. The test is repeated during the New Student Program in the fall for those new students unable to take advantage of the pre-college advance testing opportunity. Proficiency examinations for credit in the first one or two semesters of college chemistry are offered during the New Student Program preceding registration. Advance arrangements are not necessary.

FOREIGN LANGUAGE PLACEMENT AND PROFICIENCY EXAMINATIONS

Foreign language placement and proficiency examinations are given to students presenting for admission high school credit in French, German, Latin, Russian, and Spanish who plan to continue the same language in the University, except those presenting college credit in that language. These examinations enable the department concerned to evaluate the student's foreign language achievement level. Except in Latin, they include both written and aural areas. No aural portion is included in the Latin examination. Both portions of the other tests are required to enable the department concerned to evaluate the student's foreign language qualifications.

Students are assigned to the proper University course on the basis of the high school work and the results of the placement tests, and proficiency credit may be allowed in one or more college courses beyond the level of the high school work presented for admission. Any of the above students who have not completed these tests during one of the preceding spring or summer advance testing periods preliminary to advance enrollment must take them at the scheduled time during the New Student Program prior to registration.

Students entering the College of Liberal Arts and Sciences with four units in one foreign language have satisfied the language requirement for graduation from most curricula in that college, and they need not take the placement test unless they plan to do advanced work in the same language they previously studied.

Application of elementary or repeated language credit toward graduation is subject to approval by the dean of the student's college.

MATHEMATICS PLACEMENT TEST

The Mathematics Placement Test is intended to make sure that new students begin their college mathematics work with the courses they are best prepared to carry.

It is primarily for students who plan to enroll in programs of study which include college algebra or more advanced courses in mathematics. The test is given at various scheduled times and locations. It does not grant credit; the results are used solely to determine which college mathematics course should be taken first by the student.

All new undergraduate students who plan to enroll in college algebra, trigonometry, or analytic geometry in September whose permits to enter do not show college credit in algebra or more advanced mathematics are urged to take the test on one of the dates listed in the advance schedule.

Those who have taken this test in one of the sessions during the preceding spring or summer should not repeat it during the New Student Program, but all others who expect to register in a mathematics course as indicated above should take it at the hour and location indicated in the pamphlet, *Official Program for New Students,* which is sent to all new students who receive permission to enter the University as candidates for undergraduate degrees.

Students who have college credit in algebra and trigonometry, or more advanced mathematics, may register in analytic geometry or higher mathematics in accordance with the college credit they have received without taking the Mathematics Placement Test.

Proficiency examinations for credit in college level courses are offered by the Department of Mathematics on the first Saturday after the beginning of classes. Any student wishing to take such an examination should make advance arrangements with the Department.

CURRICULA REQUIRING COLLEGE MATHEMATICS

All the curricula listed below require college mathematics. Those which are starred (°) require analytic geometry or more advanced courses in mathematics. Students entering any of the following curricula who do not have college credit in algebra or more advanced mathematics, and those entering a starred curriculum who do not have college credit in *both* algebra and trigonometry must take the test.

College of Agriculture

All curricula, including Home Economics

Institute of Aviation

° Aviation Electronics

College of Commerce and Business Administration

All curricula

College of Education

Business Education
Technical Education Specialties (Industrial Education)

College of Engineering

° All curricula, including the combined Engineering-Liberal Arts and Sciences program

College of Fine and Applied Arts

° Architectural Studies
° Architecture (general and engineering options)
Landscape Architecture
Urban Planning

College of Liberal Arts and Sciences

° Chemical Engineering
° Chemistry Curriculum
° Geology

Medical Technology
* Physics Curriculum
Predentistry
Prepharmacy
Preprofessional Nursing
Preveterinary Medicine
* Sciences and Letters Curriculum for those who plan to major in home economics or one of the biological or physical sciences, including mathematics, and for those preparing to enter medicine
* Speech and Hearing Science I and II
* Teacher Education curricula in biology, chemistry, mathematics, and physics
Teacher Education curriculum in earth science

College of Physical Education

All curricula

RHETORIC PLACEMENT AND PROFICIENCY EXAMINATION

Students may satisfy all or part of the English requirements for graduation through successful performance on the Rhetoric Placement and Proficiency Examination. Those entering the University prior to completion of the English requirement who have not taken this test during the advance guidance and testing period must take it at the announced time and place during the New Student Program. (See page 152 for a statement of the English requirements for undergraduate degrees.)

Pre-College Programs for Transfers and Readmitted Students

In addition to the advance enrollment program for new freshmen described on page 67, new transfers and readmitted former students are provided with opportunity to advance enroll during the summer for the fall semester. Students receive details of these programs in the special bulletin, *Pre-College Programs for Transfer and Readmitted Students,* sent to them with their notice of eligibility for admission. The placement and proficiency examinations offered for freshmen are also available to transfer students.

Transfers entering curricula requiring college credit in biology, chemistry, foreign language, or mathematics should take the appropriate examination prior to registration, unless they have already completed one or more college courses in the subject concerned.

The results of the tests are used in connection with academic advising and assignment to courses.

Those transfers entering before completing the English requirement for graduation may satisfy all or part of this requirement through successful performance on the Rhetoric Placement and Proficiency Examination. (See page 152.)

Advance Enrollment of Continuing Students

Each semester, students currently enrolled who plan to continue their studies on the Urbana-Champaign campus during the next semester are strongly encouraged to advance enroll in order to secure the places reserved for them.

The advance enrollment plan insures participants of appropriate class schedules by enabling them to receive their academic advising and to make their selection of courses in advance of the registration period of the next semester.

Detailed information concerning procedure and available courses is distributed to students before the advance enrollment advising period begins each semester.

SPECIAL OPPORTUNITIES

Special Educational Opportunities Program, 1971–1972 Academic Year

GENERAL NATURE AND PURPOSES

The Special Educational Opportunities Program at the University of Illinois at Urbana-Champaign, commonly referred to as "Project 500," is one of several such experimental programs at universities across the country. These are designed to offer opportunities to continue formal education beyond high school to disadvantaged youth. A parallel program exists at the Chicago Circle campus.

Participants in the programs, like many other students, receive financial support from federal government grants, Illinois State Scholarship Commission grants, and tuition waivers authorized by the University. Like other students, participants in the SEOP also contribute toward their expenses through family contributions, summer and part-time employment, and loans. Financial aid also comes from private funds available to the University for this purpose. Supporting services for the program are provided by federal and foundation grants and by University contributions in the form of staff time and use of facilities.

Through the SEOP, the University is attempting to do several important things:

1. Provide educational opportunities to students who otherwise might not even be able to consider undertaking a college-level program.
2. Increase the number of minority group students on the Urbana-Champaign campus.
3. Develop educational practices and policies, both academic and administrative, which will assist and support such students and which may well benefit students generally.
4. Provide for those students not in the SEOP the vital cultural and social experience of meeting, living, and learning with and from students from a different culture.
5. Provide and disseminate to other educational institutions and agencies information which will increase their ability to deal with educational and sociological problems which affect students from disadvantaged backgrounds.

ADMISSION REQUIREMENTS

Admission to the program will be limited to applicants from Illinois who demonstrate financial need of at least $1,200 and who fall into one of the following categories:

1. Beginning freshmen who meet the high school subject-pattern requirements for the college and curriculum of their choice and who meet the high school rank-test score combination for this program. (This information may be obtained from the high school counselor.)
2. Students not meeting the above stated academic requirements may be considered for special admission even though they do not meet the high school subject-pattern requirements. For a student to be admitted on this basis, both the dean of the college involved and the Director of Admissions and Records (or their designated representatives) must concur.

Equivalent SAT Verbal and Mathematics scores are acceptable in lieu of the composite ACT score. It should be noted that in some curricula such as art, education, pilot training, music, occupational therapy, etc., additional requirements must be met.

SUPPORTIVE SERVICES

The program of supportive services will endeavor to meet the wide range of needs and problems of students in the SEOP. Supportive services are designed to provide academic and nonacademic assistance as needed.

The basic elements of the supportive services program are as follows:

1. Assessment of the student's ability through academic testing by the University's Psychological and Counseling Center.
2. Individual academic advising based upon information derived from the student's past records, test results, ability, and interests. The optimum class schedule and course selections will be determined by each student in consultation with special advisers in the various colleges.
3. Development of specially designed course offerings by various departments of the University, including basic courses in rhetoric, mathematics, chemistry, speech, sociology, biology, psychology, education, and business administration.
4. Provision for the improvement of reading, writing, and study skills through expanded use of the Reading Clinic and the Writing Laboratory.
5. Development of a faculty and student tutoring system to assist students when needed. Specially trained staff will be assigned to work closely with students to determine when such tutoring is needed, and to follow through in securing tutors. The tutors help the student learn the substance of the material, as well as help him learn how to approach and master the subject.
6. Establishment of an office with trained staff to help and counsel students on the myriad problems and questions they face, including the complexities which arise from being part of a large and diverse university.
7. Development of programs for pre-college orientation to enable the student to begin his college experience with greater awareness of what it means to be a student at the University of Illinois Urbana-Champaign campus.

APPLICATION

Applicants for participation in the program must submit completed application forms for admission to the University and arrange for their high school transcripts and test scores to be sent to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801. In addition, since a demonstrated need for financial assistance in order to attend the University is one of the requirements for admission to the SEOP, the student must complete the University Financial Aid Application, the Parents Confidential Statement of the College Scholarship Service (and, if possible, the Illinois State Scholarship Commission application form).

Application forms and additional information about the program may be obtained from the high school counselor.

Opportunities for Applicants with Superior Scholastic Records

Because of the comprehensive nature of the University of Illinois, arrangements for superior students differ among the various colleges and departments. Generally speaking, however, qualified students beginning as freshmen have special advisers, are able to enter special courses or special sections of courses as freshmen and sophomores, and are encouraged as juniors and seniors to participate in special programs for majors in the different departments, usually including some individual work, seminars of various kinds, and perhaps a senior thesis. For details of these various arrangements, see the

descriptions given in the section on the colleges in this catalog and on the individual departments in the *Undergraduate Courses* catalog.

ADVANCED PLACEMENT PROGRAM

The Advanced Placement Program, administered by the College Entrance Examination Board, is designed for able high school students who are about to enter college and who wish to demonstrate their readiness for courses more advanced than those most frequently studied in the freshman year. Advanced classes are offered in many high schools in one or more of the following subjects: French, Latin, German, Spanish, English literature and English composition, American history, European history, biology, chemistry, mathematics, and physics. There is a national examination in each subject, administered in May by the Educational Testing Service, which is designed to measure the competence of the student in terms of the point at which he should begin his college study in that subject.

The examinations are prepared by joint national committees of high school and college teachers. They are graded by other national committees on the following basis: 5, high honors; 4, honors; 3, creditable; 2, pass, and 1, fail. The marked papers are sent to the university which the student specifies he will attend. Each department within the university has the option of granting or not granting college credit and advanced placement on the basis of the Board's grade or on the basis of the student's paper. The University encourages high schools and their outstanding students to participate in the program.

A student transferring from a recognized collegiate institution who has been allowed credit for the Advanced Placement Program by that institution, and such credit is so indicated on the official transcript of credits, is also allowed such credit by the University of Illinois in the same amount as accepted by the previous institution. Application of transferred Advanced Placement credit toward graduation, however, is subject to approval by the dean of the student's college.

The specific credit recommendations at the Urbana-Champaign campus are listed below.

HUMANITIES

English Composition and Literature

1. Scores of 5 and 4 receive automatic credit for Rhetoric 101 (three semester hours), and may receive credit for Rhetoric 101 and 102 (six semester hours), depending on the judgment of a departmental committee.
2. Papers with scores of 3 or 2 are referred to the department and committee.

SOCIAL STUDIES

American History

1. Scores of 5 and 4 receive automatic credit for History 151 and 152 (eight semester hours).
2. Papers with scores of 3 will be reviewed by the department.
3. Papers with scores of 2 will not be accepted.

European History

1. Scores of 5 and 4 receive automatic credit for History 111 and 112 (eight semester hours).
2. Papers with scores of 3 will be reviewed by the department.
3. Papers with scores of 2 will not be accepted.

FOREIGN LANGUAGES

French

1. Scores of 5, 4, and 3 receive automatic credit for French 201 and 202 (six semester hours).
2. Scores of 2 are not considered for advanced placement or credit.

German

1. Scores of 5 and 4 receive automatic credit for German 210 (three semester hours).
2. Papers with scores of 3 are referred to the department.
3. Papers with scores of 2 are not considered for advanced placement.

Latin

1. Scores of 5, 4, and 3 receive automatic credit and appropriate placement as shown below.

   Virgil Examination: four semester hours credit for Latin 105 and placement in Latin 201.
   Prose Examination: three semester hours credit for Latin 201 and placement in Latin 202.
   Comedy Examination: three semester hours credit for Latin 201 and placement in Latin 202.
   Lyric Examination: three semester hours credit for Latin 201 and placement in Latin 202.

   Any combination of two examinations from Lyric, Comedy, and Prose will give six semester hours credit in Latin 201–202 and placement in Latin 203.
2. Papers with scores of 2 are not considered for advanced placement or credit.

Spanish

1. Scores of 5, 4, and 3 receive automatic credit for Spanish 221 and 222 (six semester hours).
2. A score of 2 is not considered for advanced placement or credit.

MATHEMATICS AND NATURAL SCIENCES

Biology

1. Scores of 5 and 4 receive automatic credit for Biology 110 (five semester hours), and placement in Biology 111; or automatic credit for Biology 100 and 101 (eight semester hours).
2. Papers with scores of 3 receive automatic credit for Biology 100 (four semester hours) and placement in Biology 101. Credit is not applicable in Biology 110–111.
3. Papers with scores of 2 are not considered for advanced placement.

Chemistry

1. Scores of 5 and 4 receive automatic credit for the first semester of general chemistry (five semester hours), and constitute prerequisite for admission to any second-semester general chemistry course.
2. Scores of 3 receive automatic credit for three semester hours of general chemistry, and students are permitted to enroll in Chemistry 102 for full credit, or 107 laboratory for two semester hours. Each student is encouraged to take a proficiency examination in either course immediately after enrolling.

   A student who passes Chemistry 102 either by taking the course or by proficiency

examination will be given four hours credit each in 101 and 102. A student who passes Chemistry 107 proficiency examination receives five hours credit and may enroll in 108.

3. Scores of 2 receive no credit.

Mathematics

Calculus AB

1. Scores of 5, 4, and 3 receive automatic credit for Mathematics 120 (five semester hours) and Mathematics 131 (three semester hours) and advanced placement in Mathematics 141.
2. Scores of 2 receive automatic credit in Mathematics 120 (five semester hours) and advanced placement in Mathematics 130 or 131.

Calculus BC

1. Scores of 5, 4, and 3 receive automatic credit for Mathematics 120 (five semester hours) and Mathematics 130 (five semester hours) and advanced placement in Mathematics 140.
2. Scores of 2 receive automatic credit in Mathematics 120 (five semester hours) and Mathematics 131 (three semester hours) and advanced placement in Mathematics 141.

Physics

1. Scores of 5 and 4 receive credit as shown below.

   Physics B: credit in Physics 101 (five semester hours) and Physics 102 (five semester hours).

   Physics C: credit in Physics 106 (four semester hours) and Physics 107 (four semester hours).

2. Scores of 3:

   Physics B: Students may take proficiency examination or enroll in Physics 101. If passed with grade of "A" or "B", credit is granted for Physics 101 (five semester hours) and Physics 102 (five semester hours).

   Physics C: Students may take proficiency examination or enroll in Physics 106. If passed with grade of "A" or "B," credit is granted for Physics 106 (four semester hours) and physics 107 (four semester hours).

3. Scores of 2 in *Physics C or B:* With approval of the department, students may take proficiency examination in any of Physics 101, 102, 106, 107, or 108 courses and receive credit if the examination is passed with grade of "A" or "B."
4. Score of 1 in *Physics C or B:* Students will not on this basis alone be admitted to proficiency examinations.
5. Whatever his score, a student may of course enroll for credit in any of the introductory courses if he prefers taking the courses to receiving automatic credit or taking proficiency examinations.
6. For additional information or to arrange to take proficiency examination, a student should come to Room 233, Physics Building.

PROFICIENCY EXAMINATIONS

Each semester the University gives proficiency examinations, similar to the regular semester examinations, in courses normally open to freshmen and sophomores. Except in courses attempted by examination during the pre-college program, the student must obtain the consent of the head or chairman of the department concerned to take these ex-

aminations. Proficiency examinations in more advanced undergraduate subjects are given on recommendation of the head or chairman of the department and approval of the dean of the student's college.

With specific reference to entering freshmen, students who have not obtained credit by way of the national Advanced Placement Program of the College Entrance Examination Board, but who are well prepared, are encouraged to take proficiency examinations, especially in courses required for freshmen and sophomores.

New students approved for admission in September are offered an opportunity to earn college credit in freshman rhetoric, chemistry, and foreign language (French, German, Latin, Russian, and Spanish) through proficiency examinations given by the Psychological and Counseling Center to participants in the Pre-College Programs for Entering Students described on page 66 and during the New Student Program preceding registration. New students approved for admission in the spring semester also are given this opportunity during the New Student Program.

Proficiency examinations for credit in college level mathematics courses are offered by the department on the first Saturday after the beginning of classes; proficiency examinations in the first two semesters of college chemistry are offered during the New Student Program in the fall.

Credit earned in this way is recorded on the student's permanent academic record after his registration in the University is completed.

No fee is charged for these examinations. A student who passes a proficiency examination is given credit toward graduation for the amount regularly allowed in the course, provided that this does not duplicate credit counted for his admission to the University and that the course is acceptable in his curriculum. The grade in the proficiency examination is "pass" or "fail," but no student is given a grade of "pass" unless he has made at least "C" in the examination. No official record is made of failures in these examinations, and grades received on proficiency examinations are not considered in computing averages.

Proficiency examinations are given under the following restrictions:

1. Except for participants in the Pre-College Programs for Entering Students, they may be taken only by persons who are in residence or, after having been in residence, are currently registered in a correspondence or extramural course, or who are candidates for degrees at the University of Illinois and need no more than ten semester hours to complete the requirements for their degrees. (A student attending as a visitor only is not considered to be a student in residence.)

2. They may *not* be taken by students who have received credit for more than one semester of work in the subject in advance of the course in which the examination is requested.

3. They may *not* be taken to raise grades or to remove failures in courses.

Proficiency examinations are not considered as interrupting University residence work for graduation nor is credit earned by such an examination counted toward satisfying the minimum requirement when the last thirty semester hours applicable toward the degree sought must be earned in residence. (See page 151.)

Exact times and places of proficiency examinations are announced by the departments concerned. Students who wish to take proficiency examinations other than those offered as part of the New Student Program should make arrangements at the departmental offices well in advance of the examinations.

EARLY ADMISSION PROGRAMS

ATTENDANCE IN UNIVERSITY COURSES BY ILLINOIS HIGH SCHOOL SENIORS

Qualified Illinois high school *seniors* are permitted to attend University classes for college credit under certain specified conditions. They may also enroll for college credit in correspondence and extramural courses offered by the Division of University Extension.

To qualify for admission to this program for on-campus study, a student must be recommended by his high school principal and should have approximately a 4.5 grade-point average. (See page 145 for statement of the University of Illinois grading system.) Each case is considered on an individual basis, and the Director of Admissions and Records, the dean of the college concerned, and the department offering the course must concur with the high school principal's recommendation. Academic advisement of these students is the responsibility of the Urbana University Honors Program. Normally, such work should not be used to accelerate a secondary school student at the high school level, but should be used as a means of broadening and enriching the student's educational program.

The courses taken by these selected talented seniors is work over and above the regular secondary school curriculum. Grades and course credits will be recorded on the permanent University of Illinois record of the student and will appear on any official transcript issued to or for him. If the student enters the University after graduating from high school, the courses will be credited toward University graduation if applicable to the chosen degree.

Students applying for admission or readmission to resident or extramural courses under the provisions of this program should make arrangements for the following materials to be forwarded to the Office of Admissions and Records:

1. *An application for admission or readmission to the University* (not required of students enrolled under this plan in the immediately preceding semester or summer session).

2. *An official copy of the student's high school transcript,* covering all work completed in high school and courses in progress (if applicable). This transcript should be accompanied by any test scores available on examinations such as those conducted by the College Entrance Examination Board and the American College Testing Program (ACT). These tests, however, are not required unless the student later applies for admission to the University as a degree candidate. (Acceptance under the Early Admission Program does not guarantee later acceptance as a degree candidate.)

3. *A letter of recommendation from the high school principal.* This recommendation must include a statement of the University course or courses to be taken and must also certify that the program will not interfere with the completion of requirements for graduation from high school.

Applications (including complete credentials) for admission or readmission should be submitted to the Office of Admissions and Records according to the schedule established for other students (see page 26).

Students interested in correspondence study should write directly to the Director of Correspondence Courses, Division of University Extension, 247 Illini Hall, Champaign, Illinois 61820, for their application instructions. It is suggested that students comply as nearly as possible with the semester system of study and apply at least two weeks prior to the beginning of any semester in which they wish to pursue correspondence study. For the summer months, applications should be submitted no later than the middle of May.

Regular University fees, as outlined on page 131, are assessed for these registrations, except that fees for registration in a departmental honors program do not exceed those for registration in the comparable non-honors program.

Applications, recommendations, and other information concerning prospective students for this program of study should be addressed to the Director of Admissions and Records, University of Illinois, Urbana, Illinois 61801.

EDMUND J. JAMES SCHOLARS

From each freshman class entering the University of Illinois at Urbana-Champaign and the Chicago Circle campus, there is selected a special group of students known as

the Edmund J. James Scholars, named after one of the University's most distinguished presidents. Approximately 10 per cent of each freshman class entering the University of Illinois at Urbana-Champaign is enrolled in the James Scholar program.

The James Scholar program at the Urbana-Champaign campus provides a number of special curricular opportunities to academically talented undergraduate students. Designation as a James Scholar is the highest academic recognition given by the University to an undergraduate and entitles the student to numerous academic privileges. There is no monetary award associated with the designation, and students who need financial assistance should apply for monetary scholarships.

James Scholars are characterized by outstanding academic records, high general aptitudes for college work, and reputations for seriousness of purpose, persistence, and self-discipline in educational endeavors; in addition, they tend to be prominent leaders in many aspects of campus life.

Students selected to participate in the program may enroll in any undergraduate curriculum. Although the nature and extent of available privileges and opportunities vary among the individual colleges, unusual academic challenges are open to James Scholars in every course of study.

The curriculum arrangements include the provision of honors courses, honors sections, special seminars, and interdisciplinary colloquia with small enrollments planned to appeal to the interests of students of high academic ability. In addition, James Scholars are encouraged to pursue their individual interests by means of independent study and/or undergraduate research projects.

It is not mandatory that a James Scholar take a full schedule of special courses. However, in order to retain his designation as a James Scholar he must carry at least one honors course every semester and maintain the cumulative grade-point average designated by the respective colleges. These range from 4.0 in the colleges of Agriculture, Fine and Applied Arts, and Education through 4.25 in the colleges of Commerce and Business Administration, Liberal Arts and Sciences, and Physical Education, to 4.3 in the College of Engineering. Students may be separated from the program either at their own request or for low academic performance.

JAMES SCHOLAR APPLICATION PROCEDURES

All candidates for James Scholar status must have received letters of eligibility for admission to the University before submitting applications to the James Scholars program.

Seniors enrolled in Illinois high schools should follow these steps:

1. **Nomination.** Each fall, high school counselors and administrators are requested to nominate promising seniors who plan to attend the University's Urbana campus. Seniors to be nominated should hold a class rank at or above the ninety-fifth percentile and should score at or above the nineteenth percentile on ACT: Composite (national norms). Nominees presenting lower class rank or admission test scores will be considered if they demonstrate unusal potential for success in their chosen academic fields. A graduating senior wishing to be considered for appointment as a James Scholar should contact his principal or counselor in September and ask to be included on the nomination list from his high school. The annual deadline for receipt of nominations is one month after the date established annually by the University for notifying applicants of their eligibility for admission to the University.

2. **Application.** Early each January James Scholar Application forms and an accompanying letter are mailed to the home address of each nominated student who has been accepted for admission by the University. These materials contain information about procedures to be followed in order to complete the application process. The deadline for receipt of application is February 1, but applications received earlier will receive priority.

3. **Selection.** The Faculty Honors Selection Committee reviews each completed application to select entering James Scholars. Those selected are so notified in early

March. Applications from students not appointed are deferred for review at the end of each student's first and second semester at the University. Those meeting honors criteria after either review period may be invited to participate in the program.

Students enrolled in high schools outside the state of Illinois should apply for admission to the program by writing to the Honors Programs Office for application forms and related materials.

Resident students at the University of Illinois usually are invited to become James Scholars by representatives of the respective college honors councils. Eligible students not contacted in this manner should apply directly to the Honors Programs Office.

Students transferring to the University of Illinois who participated in a recognized honors program at an institution holding membership in the National Collegiate Honors Council are named James Scholars immediately upon submission of evidence of their honors standing in the previous institution. Transfer students not previously enrolled in recognized honors programs become eligible by achieving the required cumulative grade-point average after the first semester in residence on the Urbana-Champaign Campus.

The procedures of selection differ at the three campuses of the University. Specific inquiries to the Urbana-Champaign campus should be sent as follows:

For questions on programs for superior students:

The Director of University Honors Programs
University of Illinois at Urbana-Champaign
1205 West Oregon Street
Urbana, Illinois 61801

For questions on admission and records:

The Director of Admissions and Records
University of Illinois at Urbana-Champaign
100a Administration Building
Urbana, Illinois 61801

For questions on undergraduate monetary awards:

The Office of Student Financial Aids
University of Illinois at Urbana-Champaign
Room 107, 707 South Sixth Street
Champaign, Illinois 61820

PASS—FAIL GRADING OPTION

In order to encourage students to explore areas of interest which they might otherwise feel compelled to avoid because such exploration might lead to poor grades, and to reduce the sometimes detrimental overemphasis on grades, a system of pass-fail grading on a limited scale has been initiated for a trial period of four years from February, 1968, at the Urbana-Champaign campus of the University.

Any full-time undergraduate student in good academic standing (not on probation) may, with the approval of his adviser, elect to take a course under the pass-fail system. A student who goes on probation after enrolling must change his program to eliminate the pass-fail option. Undergraduate students may elect to take a course under the pass-fail option only during the first two weeks of instruction in a semester (first week in a summer session). The pass-fail option form must be properly approved and deposited in the college office during this period.

A maximum of eighteen hours earned under this option may be applied toward a degree at the Urbana-Champaign campus. Normally, only one course with credit up to five semester hours may be taken under this grading system in any one semester.

Any upper or lower division course may be chosen under this option except courses designated by name or area by major departments for satisfying the major or specifically required by name by the student's college for graduation.

Exception: Foreign language courses at the 104 level, or the equivalent, may be taken under the pass-fail option when taken to fulfill the College of Liberal Arts and Sciences foreign language requirement for graduation. This provision does not include the prerequisite courses, 101 through 103.

In cases of subsequent change of major, courses in the new major field previously taken under the pass-fail option may qualify for meeting major requirements.

Grades "P" or "F" earned under this option are not included in computation of the grade-point average, but the credit hours are included as part of the total hour load for the term.

Students in the professional Colleges of Law and Veterinary Medicine, and students in the Graduate College, also may elect undergraduate courses under the pass-fail system. Graduate students also may elect a limited number of graduate courses under the pass-fail system, subject to approval of their major advisers, during advance enrollment, the regular registration days, and the first two weeks of instruction in a semester (first week in a summer session).

Opportunities for the Physically Handicapped

The University of Illinois has established the Division of Rehabilitation-Education Services with special facilities and services for students with permanent physical handicaps such as paraplegics, triplegics, polios, spastics, deaf, blind, and others needing help. Physically handicapped students ordinarily live in regular University residence halls and attend all regular classes with the general student body. This enables such students to pursue almost any regular curriculum in any college of the University at Urbana-Champaign so long as it is determined that it is physically and academically feasible for the student to pursue a particular curriculum. There are, of course, limitations to the total number of physically handicapped students that can be accepted at any one time as well as limitations on the number that can be accepted in specific curricula at a given time. Preference is given to residents of Illinois, but properly qualified students from other states are considered.

The requirements and procedures for admission are the same as for general student enrollment; handicapped students are expected to meet all admission requirements of the University, including the physical examination, and of the colleges and curricula in which they choose to enroll. However, handicapped students should make early application through the Office of the Director, Division of Rehabilitation-Education Services, Oak Street at Stadium Drive, Champaign, Illinois 61820. This office is responsible for the administration of those facilities and services which make it possible for such students to attend the University. The Director will send the applicant detailed information on all aspects of campus life.

Acceptance of physically handicapped students by the Office of Admissions and Records must be supported by joint approval of the McKinley Health Center and the Division of Rehabilitation-Education Services. The University may not be able to provide the necessary facilities for all who apply. Therefore, for any semester or session, early application for admission is essential.

Work-Study and Industrial Practice Programs

TECHNICAL EDUCATION SPECIALTIES (INDUSTRIAL EDUCATION) COOPERATIVE ARRANGEMENTS

Cooperative arrangements have been made by the University for supervised occupational experience of technical education specialty students while employed in selected employment locations. This program is designed for students preparing to become certified vocational or technical specialty instructors, for students preparing for employment in training departments maintained by business or industrial organizations, or for stu-

dents preparing to be industrial arts teachers. For additional information, see the section concerning the Curriculum in Technical Education Specialties (Industrial Education) on page 275 of this catalog.

COOPERATIVE PROGRAMS IN ENGINEERING

The College of Engineering offers a four-year degree curriculum in the Teaching of Engineering Technology which is designed to meet the requirements for teaching electrical or mechanical technology at various levels. Three summers of supervised off-campus practice are required for graduation. See page 290 for details.

The College of Engineering also provides an extensive cooperative engineering education program with various industrial firms for off-campus practice of engineering for interested students in all engineering curricula. Under this program, students alternate periods of time on-campus with periods of time in industry where they apply the knowledge they have gained on campus in the actual practice of engineering in industry. The "co-op" program, as it is often called, is a voluntary program in which the student meets the same academic requirements for graduation as a normal student but, additionally, he completes a minimum of four industrial periods off-campus. No academic credit is allowed for the industrial experience.

WORK SCHOLARSHIPS FOR SUPERIOR STUDENTS

Work Scholarships for Superior Students are awarded to seventy-five entering freshmen each year which provide tuition and employment by the University to enable them to earn all or a substantial portion of the cost of meals. These scholarships are renewed from year to year if the holders maintain superior scholastic records and give satisfaction on their jobs. See page 99 for details.

FREE EMPLOYMENT SERVICE

Free service of the Student Employment Office is available for those students who must earn part or all of their expenses while attending the University.

ECONOMIC OPPORTUNITY ACT OF 1964

The University has approved participation in the work-study program sponsored by the Economic Opportunity Act of 1964. Undergraduate and graduate students from low income families may be eligible for participation in the work-study program. Detailed information may be obtained from the Director of Student Employment, Room 107, 707 South Sixth Street, Champaign, Illinois 61820.

Correspondence and Extramural Study

The Division of University Extension, with the assistance of approximately 1,000 members of the University's academic departments, provided formal instruction to 50,522 adults during the 1969–1970 academic year. Undergraduate and graduate level education was offered through 525 extramural classes conducted in eighty-five cities and forty-nine counties of Illinois, with 10,481 enrollments. Correspondence enrollment attracted some 8,808 students, and many thousands more benefited from special training programs, short courses, conferences, and institutes arranged by the Division on campus and in various communities throughout the state.

Credit for correspondence courses taken through the University of Illinois and other fully accredited institutions may be allowed, but only on approval of the dean of the college concerned. After matriculation a student may, with the approval of the dean of his college, count toward his degree as much as sixty semester hours of credit earned in extramural courses and/or correspondence study, under the following conditions:

1. If he completes all the remaining requirements for the degree in residence at the University, or
2. If he presents acceptable residence credit for work done elsewhere and completes the requirements needed for his degree in residence at the University. In all such cases the senior year (two semesters of not less than thirty semester hours) must be done in residence on the Urbana-Champaign campus of the University.
3. University of Illinois correspondence and extramural courses are not counted toward satisfying the minimum residence requirements for the degree (the last thirty semester hours), nor are they considered as interrupting University residence.
4. A student enrolled for courses in residence must obtain approval of the dean of his college to enroll concurrently in correspondence courses.
5. No student is permitted to register in more than three correspondence courses at one time.
6. A student who has been dropped from the University of Illinois for poor scholarship must obtain the recommendation of the dean of his college before completing his application for admission to correspondence work and before completing registration in an extramural course. A student dropped from another collegiate institution is considered for admission to correspondence study only on recommendation of the proper authorities of the institution from which he was dropped.

A student who has completed his first three years in residence at the University, earning a minimum of ninety semester hours, may do all or part of his senior year in extramural or correspondence study or in attendance at another accredited college or university, subject to meeting all the requirements for his degree as announced by his college. (See also pages 52 and 132.)

Televised Instruction

The University carries on a substantial program of instructional television where its use shows promise of improving instruction. A number of courses are presented in large part by professors whose instruction is recorded on videotape and transmitted to classes over an extensive closed-circuit system. Through this arrangement, the student receives instruction by especially well-qualified teachers who have had more than the usual amount of time to prepare each lesson, and who have had the assistance of specialists in organizing and presenting instruction through this medium.

Experiments, demonstrations, or other visual materials that can reinforce learning and make it more interesting are incorporated into the televised lessons. Students in teacher education are given the opportunity, through television recordings, of observing classroom behavior of other teachers and students, and of observing and criticizing examples of their own teaching.

Independent Study and Individualized Programs

In order to increase flexibility within established curricula to meet special needs of students, the faculty of each department may establish a special course for independent study on or off campus, for experimentation, or for seminars on topics not treated by regularly scheduled courses. Requests for initiation of the course and suggestions for areas of study may be made by students, or the course may be initiated by faculty members. Such courses may be offered with approval of the faculty member involved and the department head.

The various colleges may treat formal curriculum requirements with sufficient latitude to permit development of individualized programs while maintaining those aspects

of the curriculum which are indispensable to the area of specialization being pursued. No prior administrative approval is required for such modifications. Faculties may establish a modified curriculum for special groups of students, or a student may initiate a request for curriculum modification.

Study Away from Campus

The University permits students who have been enrolled on campus for at least a semester or summer session, with the approval of their adviser and the appropriate department and college offices, to undertake independent study away from campus, either in the United States or abroad.

Colleges and departments may establish variable credit courses which permit such students to continue enrollment in the University upon payment of an appropriate fee. Final determination of credit is made by the department and college concerned, on completion of the program of study. The following colleges have established such courses.

COMMERCE AND BUSINESS ADMINISTRATION

Business 299. International Business Study.

Upon written approval of his adviser, his major department, and the College office, a student may earn up to eighteen credit hours per semester undertaking a study and/or research project in international business away from the Urbana-Champaign campus.

The student's major department will verify the satisfactory progress of the work by means of interim and final written reports, written or oral examinations, or other means established by his major department. The course may be repeated for a maximum of thirty-six credit hours, all of which must be earned within twelve consecutive months.

While absent from the Urbana-Champaign campus, the student must continue to pay all fees required by the University of Illinois to retain continuity of enrollment, and to allow the time spent away from this campus to count toward residency. The student must be a Commerce major in good standing who has completed at least forty-five semester hours toward a Bachelor's degree with at least one semester in residence at the University of Illinois.

FINE AND APPLIED ARTS

Fine and Applied Arts 299. FAA Study Abroad.

This course provides campus credit for foreign study and/or travel. A detailed proposal for study abroad must be submitted for approval by the appropriate committee of the department in which the student is studying and the College Dean's Office prior to such study abroad. Junior standing is required.

Up to twelve semester hours may be earned in a semester and up to six semester hours in a summer session. The course may be repeated for a maximum of thirty semester hours, all of which must be completed within one calendar year. No credit is given for the summer session only unless the student is registered in one of the organized University programs abroad just prior to or after the summer session. Final determination of credit and its application toward the degree is made after a review of the student's work abroad by the departmental committee and the College Office.

LIBERAL ARTS AND SCIENCES

LAS 299. Liberal Arts Study Abroad.

The College of Liberal Arts and Sciences has established a special course which provides credit for foreign study and/or travel. This course is open also to students who are enrolled in other colleges within the University. A student's proposal for study abroad

must have prior approval of his major department and his college office. Final determination of appropriate credit is made upon the student's completion of the work.

The course grants from zero to fifteen semester hours of credit each semester and may be repeated to a maximum of thirty semester hours per academic year, or to a total of thirty-six semester hours, all of which must be earned within one calendar year.

Inquiries should be addressed to the Students Abroad Office, 301 Illini Towers, University of Illinois at Urbana-Champaign, Champaign, Illinois 61820.

Foreign Study Programs

ARCHITECTURE YEAR IN FRANCE

The Department of Architecture sponsors a year abroad program headquartered in Versailles, France, for fourth-year students.

Those selected spend two semesters in accredited study emphasizing (1) firsthand examination of historic monuments and spaces and their significant contemporary counterparts, (2) meeting outstanding European leaders of the architectural profession and scholars in other disciplines, and (3) broadening their cultural backgrounds, and (4) promoting international understanding.

Instruction is provided by members of the University of Illinois Department of Architecture faculty and members of the Unité Pédagogique d'Architecture #3 faculty, also located in Versailles. Students are enrolled on the Champaign-Urbana campus, and regular full-time off-campus Urban tuition and fees apply. Living costs for the students in France are approximately the same as in Champaign-Urbana. Travel costs constitute the major addition to the normal student budget for those who participate in the program. Credits earned through this program are counted as University of Illinois residence work.

For further information, contact Professor Harold Young, 117 Achitecture Building, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

STUDY OPPORTUNITIES IN AUSTRIA

The Department of Germanic Languages and Literatures sponsors a two-semester study program based at the Pädagogische Akademie, an institution that trains future Austrian teachers, in Baden, fifteen miles south of Vienna.

At the Pädagogische Akademie, University of Illinois students attend classes, along with Austrian students, taught by Austrian professors. A faculty member from the Department of Germanic Languages and Literatures accompanies the students to advise them and to evaluate their work. He also teaches courses open to both American and Austrian students. At least half of the work of students from the University of Illinois is done in Baden by taking courses in language, literature, education, and civilization. The other half consists of electives taken either at the Pädagogische Akademie or at another institution of higher learning in Vienna.

Students in the Curriculum Preparatory to the Teaching of German can fulfill several College of Education requirements in Baden. Qualified students in colleges other than Liberal Arts and Sciences are encouraged to participate and to develop, with the aid of their advisers, individual programs which take advantage of the facilities and opportunities Vienna has to offer. Transfer students are eligible for admission, but must be enrolled at the University of Illinois during the time of their participation.

Unless he desires a single room, each American student is housed with an Austrian roommate in the new dormitory at the Pädagogische Akademie. Special low-cost transatlantic travel arrangements are available. The amount needed to pay for room and board at the Urbana-Champaign campus normally covers the cost of both transatlantic travel and room and board at Baden. Beyond that, students pay only regular University of Illinois tuition and off-campus fees. Fellowships, loans, and tuition and fee waivers are applicable to the program.

Applicants should have at least a 3.75 overall average, a 4.0 average in German, and language proficiency at the German 212 level. Upon successful completion of the study program, thirty-two hours of residence credit will be applied to the student's record at the University of Illinois.

Detailed information about the program is available from the chairman of the Department of Germanic Languages and Literatures, 317 Lincoln Hall, Urbana, Illinois 61801.

YEAR ABROAD PROGRAM IN FRANCE FOR STUDENTS OF FRENCH

The University of Illinois at Urbana-Champaign, together with the University of Iowa, sponsors a year abroad program, constituting the equivalent of a year in residence on the American campus.

The program consists of five weeks of language review and cultural orientation at the University of Grenoble, followed by eight months at the University of Rouen, ninety miles northwest of Paris. Accompanied by a Professor of French representing one of the sponsoring institutions who acts as local administrative director of the program and adviser, the students take courses in French language, literature, history, geography, art, political institutions, and other subjects of particular interest to each participant. All courses are taught by French professors. Some of the courses are common to both French and American students. Upon successful completion of the program, the equivalent of at least thirty semester hours is granted each participant and his performance is recorded in his official University record.

Planned for students in their sophomore, junior, and senior years, those majoring in French language, literature, and in the teaching of French are strongly urged to take advantage of this program. An applicant should have at least a 3.5 University average ad a 3.5 average in French, and should have completed, before participation, one semester of introduction to French literature (French 201 or 202, or the equivalent) and two semesters of language classes beyond the four semesters of the introductory sequence—that is, any combination of two semesters of intermediate composition and conversation.

Transatlantic transportation is provided, as well as transportation within France, cultural activities, special lectures, living accommodations, and meals. In both Grenoble and Rouen, participants live in French homes; individual housing arrangements can also be made. The students pay only for transportation, living expenses, books, tuition, and off-campus fees. The total cost is comparable to the average expenses incurred during the academic year on the campus at Urbana-Champaign. Fellowships, loans, and tuition and fee waivers are all applicable to the program.

Transfer students are eligible for admission, but during the time of his participation a student must be enrolled at one of the two sponsoring institutions.

The application deadline is February 15. Applicants are selected by a local screening committee, and their names are announced in March. Application forms and a detailed brochure are available through the chairman of the program or through the Department of French, 247a Lincoln Hall, Urbana, Illinois 61801.

ENGINEERING FOREIGN EXCHANGE SCHOLARSHIP PROGRAM

The College of Engineering participates in an Exchange Scholarship Program with the Technical University in Munich, Germany. Under the terms of the scholarship, a University of Illinois student is given a tuition scholarship for one academic year at the Technical University and receives a stipend roughly equivalent to $1,800, and a student selected by the Technical University receives a tuition scholarship for the same period at the University of Illinois and an equivalent cash stipend, payable in monthly installments. Both students are responsible for their own transportation expenses. A different student will be selected each year.

Students eligible for study in Germany must be enrolled in one of the following curricula: civil engineering, electrical engineering, industrial engineering, mechanical engineering, metallurical engineering, or engineering physics. It is expected that the

full year's study abroad will be used toward graduation in the student's curriculum at Urbana-Champaign.

For a student to participate in the program, he must have completed German 104 or the equivalent, must have finished his sophomore studies in engineering at the University of Illinois at Urbana-Champaign before leaving for Germany, must be an outstanding scholar who would be an excellent representative of the University of Illinois overseas, and must be an American citizen.

The program is under the general administration of the Engineering College Honors Council although the recipient need not be an honors student if he has an outstanding undergraduate record.

ON–THE–JOB TRAINING IN FOREIGN COUNTRIES

IAESTE (International Association for the Exchange of Students for Technical Experience) is a private, non-profit organization which enables students of engineering, architecture, and the sciences to obtain on-the-job training in foreign countries. Any student, undergraduate or graduate, who is enrolled in good standing at the University and who has completed at least the sophomore year of studies may apply. Generally, the maintenance allowance is adequate to cover living expenses while in training. Further information about these opportunities may be obtained from the Associate Dean's office, 101 Engineering Hall, Urbana, Illinois 61801.

SPANISH SUMMER PROGRAM IN MEXICO

The Committee on Institutional Cooperation, of which the University of Illinois is a member, sponsors an annual eight-week summer program of Spanish at the Universidad Ibero-Americana in Mexico City to provide highly qualified undergraduate students with the opportunity to enhance their facility in the use of the Spanish language and to enrich their special fields of concentration. It is intended primarily for students whose area of specialization is Spanish, but is open to undergraduate students from other disciplines who have a demonstrated ability in the use of Spanish.

Participants are expected to enroll in a full program of three basic courses, for which they may receive eight semester hours of credit which is acceptable as residence work toward the University of Illinois degree. With written permission from his academic adviser, a student may be allowed to substitute one course from the regular curriculum of the Universidad Ibero-Americana for one of the usual three courses in the program.

Only students from CIC institutions will be admitted to the program. Each applicant must (1) have the equivalent of a third-year college-level competence in Spanish, (2) show a 4.5 average (in terms of the University of Illinois grading system) in Spanish courses and be in good academic standing, and (3) arrange for a letter of recommendation attesting to scholarship and language competence from a faculty member in his home department.

Completed applications must be received by the Director of the program no later than mid-March, and those accepted will be notified about April 1. Further information can be obtained in the office of the Department of Spanish, Italian, and Portuguese, 226 Lincoln Hall, Urbana, Illinois 61801.

Participants are housed with Mexican families. The fee for the 1971 program will be approximately $600.00. This includes one-way transportation to Mexico City, room and board, tuition, and certain scheduled excursions; it does not include books, health insurance, or inoculations. Limited scholarship aid is available for some participants, with awards to be determined independently by each of the participating institutions.

INTERCOLLEGIATE CENTER FOR CLASSICAL STUDIES IN ROME

The University of Illinois participates in the *Intercollegiate Center for Classical Studies in Rome* sponsored by Stanford University. The academic program is supervised by a Managing Committee elected from the participating institutions, and the faculty is chosen from the classics departments of participating institutions.

The program consists of two terms, corresponding in general with an extended semester system. Instruction, educational field trips, vacations, and examinations are sched-

uled so that for each term the students complete the equivalent of two academic quarters of work. Students accepted for the fall term may either return on completion of that term or remain for the full academic year.

The courses offered depend to some extent on the academic background of the student body, as well as the areas of special competence of the current faculty, and vary from the fall term to the spring term. During each term the curriculum provides a balance of Greek readings, Latin readings, Ancient History (Greek and Roman), and Ancient Art and Archeology. If the group includes students requiring Elementary Greek, such a course will be offered. Advanced work and special projects will be offered for advanced students. The normal course load for each term is eighteen semester hours.

Undergraduate students are nominated by their own institutions, usually for their junior year, with final selection made by the Managing Committee. A transcript of the student's record and two recommendations (one from the Department Head) are required of all applicants. Applications for admission and scholarships should be submitted to the Head of the Department of Classics, 361 Lincoln Hall, Urbana, Illinois 61801, as early as possible. Nominations must be made at least 120 days prior to the opening of each session, and selections are made at least sixty days prior to the opening date.

Admission is confined to students who are enrolled as undergraduates at one of the constituent institutions of the Center. Each applicant must satisfy the following requirements:

He must be a *bona fide* major in Classics (Greek, Latin, or both in combination).
He must have had at least four semesters or six quarters of college-level Latin or the equivalent.
He must have had at least one semester or two quarters of Greek. (The Selection Committee may make certain exceptions. Good students without Greek should apply.)
He should have a general average of "B."

The center is located in a villa on the Janiculum (Via Ulisse Seni 2) in Rome, close to the present American Academy. It is on the main bus lines and is within easy reach of central Rome, and is convenient to nearby archeological and historical resources. The villa is situated in an attractive compound immediately adjacent to a pleasant park. It contains private rooms for thirty students, classrooms, library, and dining and recreation rooms. Faculty, administrators, and students live in the Center and normally take their meals there.

A fee of $1,700 per term is charged each student. This includes: travel to Rome from home or college (whichever is closer); tuition, room, and board at the Center; the major share of costs for trips outside Rome; and ordinary medical services at the Center. Students must pay for their own return tickets to the United States and other expenses not enumerated above. To cover part of the expenses of the two major field trips (each approximately nine days in length) each student is asked to contribute a total of $100. This amount will be collected immediately after arrival at the Center. A security deposit of $50 is required of each student, which is refunded when all obligations to the Center and to local firms have been met. Textbooks will be supplied at cost when the student arrives at the Center. (At least $50 should be allowed for textbooks.)

Students accepted for this program will register on their home campuses, and those holding scholarships will continue to receive the usual benefits provided by the scholarships while studying at the Center. However, this provision applies only to scholarships with an actual cash value and does not include, for example, Illinois State tuition Scholarships. In addition, the Center has funds for a limited number of scholarships which are awarded on the basis of need and academic record. The application for a scholarship from the Center should be included in the general application for admission.

ELEMENTARY EDUCATION SEMESTER IN ENGLAND

The Department of Elementary Education has offered since the spring semester, 1970, an opportunity for undergraduate students at the junior level to study in England.

The program offered involves study at the University of Bristol and associated teachers' colleges, and work in the infant and junior schools of England.

Students carry several courses and have opportunities to assist regular teachers in classrooms. The semester of work and study enables students preparing for teaching to receive first-hand experience working with children and to work with teaching methods and curricula used in England.

Costs for the semester of study are borne by the students involved. It is anticipated that total costs to students, in addition to transportation expenses, will not exceed the normal costs at the University of Illinois at Urbana-Champaign by any significant amount.

Inquiries regarding the program should be directed to Professor Theodore Manolakes, Chairman, Department of Elementary Education, 306a Education Building, Champaign, Illinois 61820.

SERBO-CROATIAN SUMMER LANGUAGE PROGRAM IN YUGOSLAVIA

Beginning in the 1971 summer session, the Department of Slavic Languages and Literatures and the Russian and East European Center will sponsor an eight-week intensive second-year Serbo-Croatian program at the Center for the Study of Foreign Languages in Zagreb, Yugoslavia. Some ten students, mostly from the University of Illinois, are expected to participate in the program.

The tentative program for the session calls for one hour per day to be spent on grammar review and drills, one hour on conversation on assigned topics, one hour on the survey of Serbian and Croatian literatures, and one-half hour in the language laboratory. Cultural events and excursions designed to bring the students in contact with Yugoslaves will be arranged.

Tuition and room and board in Yugoslavia will be provided by a grant from the United States Office of Education. Students are expected to provide their own transportation, but several partial grants for this purpose will be available from the Russian and East European Center.

For additional information and application forms, interested students should contact Professor Rasio Dunatov, Department of Slavic Languages and Literatures, University of Illinois, Urbana, Illinois 61801.

UNIVERSITY OF ILLINOIS YEAR ABROAD PROGRAM IN SPAIN: BARCELONA AND MADRID

Beginning in September, 1971, the University of Illinois, Urbana-Champaign, will sponsor a year abroad program in Spain which constitutes the equivalent of a year in residence on our campus.

The program is designed primarily for students majoring in Spanish or the teaching of Spanish. Although planned for students in their junior year, seniors and perhaps well-qualified sophomores will certainly be considered for admission. Also, candidates majoring in other areas may apply, provided their work in these fields could be enhanced by a year devoted largely to literature and language studies. Students of particularly high quality from other universities may also be considered for acceptance.

The group will be limited to 30 students. The minimum curricular requirements for participation are as follows: 1) The completion of a fourth-semester course in Spanish, or the equivalent; 2) intermediate-level work in conversation and composition and an intermediate-level course in the reading of Spanish literary texts would be desirable but not necessary; 3) students should show a 4.0 average in their courses in Spanish and at least an overall 3.50 average in order to be considered (on a five-point scale). Total cost including one-way transatlantic air fare will be approximately $1,400, plus University of Illinois tuition. The student will also be responsible for book and laundry expenses.

Students will attend courses in Spain during the nine-month period equivalent to two semesters at the University of Illinois, Urbana-Champaign campus. Upon successful completion of the year's study, thirty semester credit hours will be applied to one's record at the University of Illinois.

The month of September will be spent in a preliminary orientation session in Madrid. This introduction to Spanish cultural life will be handled under the auspices of the *Instituto de Cultura Hispánica* which will be in charge of excursions to points of interest near Madrid. Our students will have intensive classes in the Spanish language and organized discussions with students from the University of Madrid. In addition, several special lectures will be given by distinguished Spanish professors, leading playwrights, and contemporary writers. After completing this period of orientation, the students will go by chartered bus to Barcelona with intermediate stops at important sites (Zaragoza, Lerida, etc.).

At the University of Barcelona, the eighth-month portion (October to May) of the program will take place. Under the general guidance of the director, professors from this university will staff five special courses each semester. It will be possible, however, for certain exceptionally well prepared members to make an election from the University of Barcelona's offerings in substitution for a course in our program.

Lodging for approximately half of the thirty students will be in "colegios mayores," Spanish student dormitories; the remainder will reside in private homes. Those students assigned to dormitories will live either in single rooms or with a Spanish roommate, not with an American colleague.

The first director of the Illinois Year Abroad Program in Spain will be Professor Alberto Porqueras-Mayo, Professor of Spanish at the University of Illinois, and who holds a Doctorate in Philosophy from the University of Madrid.

The application deadline is February 1. The candidates selected by a local screening committee will be notified in March. Application forms are available from the Department of Spanish Office, 224 Lincoln Hall, or from Professor Joseph S. Flores, Chairman of the Illinois Year Abroad Program in Spain, 219 Lincoln Hall, University of Illinois, Urbana, Illinois 61801, telephone (217) 333–1739.

RECREATION AND PARK ADMINISTRATION SEMESTER IN ENGLAND

Students pursuing a major course of study in recreation and park administration may elect a semester abroad in England. This semester of study, to be taken in the spring of the third year of course-work, will consist of personal experience with one of several leisure time programs, work experience in a selected agency, and one term of academic study in an English college. The period of time involved will be from mid-semester break until the end of June. (The spring term in England is from Easter until the last week of June.)

Field experiences will be available through the Outward Bound Trust, the Boy's Club Adventure Center, and others. Work experiences will be arranged in a variety of agencies to meet the needs of students in the various options within the curriculum in recreation and park administration. Students in therapeutic recreation may work for the Royal National Institute for the Blind, at the Stoke-Mandeville Spinal Injuries Center, or at various county health department operations. Outdoor recreation and park administration students may elect experiences with the National Trust, Country-Side Commission, or the Forestry Commission. General recreation students may work in sport and recreation centers located in new towns, the London County Department of Parks, the Liverpool Department of Parks and Gardens, the Inner-London Youth Service, the Liverpool Youth Service, the Central Council for Physical Recreation, or in many other community programs. Thurrock Technical College in Essex, St. Luke's College in Exeter, and Rolle College in Exmouth will provide academic study programs. Thurrock Technical College is approximately thirty-six miles east of London; the other two colleges are in the southern English county of Devon near the seacoast.

Costs of the program are to be borne by the student but it is anticipated that the total amount will not exceed the normal costs of a semester on campus at Urbana-Champaign. The student will receive a full semester's credit (approximately 16 semester hours) for the program.

For further information contact Dr. George Lowrey, Coordinator of Curriculum and Instruction, Department of Recreation and Park Administration, 104 Huff Gymnasium, Champaign, Illinois 61820.

Religious Education

RELIGIOUS FOUNDATION COURSES

A maximum of ten semester hours of credit in religious education may, with the approval of the dean of the college concerned, be counted toward graduation.

Courses of study offered by the religious foundations located in Urbana-Champaign which have been approved by the College of Liberal Arts and Sciences Committee on Courses and Curricula are accepted for credit by the University *provided the student is currently registered in University courses.* Registration in these courses is limited to registered students of sophomore standing or above and must be approved in advance by the dean of the student's college. Grades in these courses are not included in the student's all-University scholastic average, and the courses are not counted as interrupting residence or toward satisfying minimum residence requirements for graduation.

UNIVERSITY PROGRAM IN RELIGIOUS STUDIES

The interdepartmental Program in Religious Studies is sponsored by the College of Liberal Arts and Sciences and the Departments of Anthropology, Classics, History, Philosophy, and Sociology. The Director of the Program is Professor William R. Schoedel of the Department of Classics, 361 Lincoln Hall. Students wishing to study in this area should consult with their advisers and with the Director of the Program to develop individual programs suited to their needs and interests.

A minor in religious studies, designed to accompany a major in any department, may be elected. Specific course requirements are listed in the *Undergraduate Courses* catalog.

Undergraduate Credit for Service and for Education in the Armed Forces

The University, under general provisions administered by the All-University Committee on Admissions, recognizes for college credit certain training and experience in the Armed Forces of the United States. The completion of military service in the Air Force, Army, Marine Corps, or Navy, including basic or recruit training of six months or more, is accepted for credit in four semesters of basic military and for the general University requirement of four semester hours of credit in physical education upon presentation of evidence of honorable discharge or transfer to the Reserve component. Candidates for graduation who are still in military service are entitled to the same credit. Additional credit in military may be granted for courses completed in the service which are acceptable as the equivalent for the advanced R.O.T.C. at the University of Illinois.

The Committee recognizes for credit correspondence courses of college grade and the examinations in special fields prepared by the United States Armed Forces Institute and the Marine Corps Institute. The College Training Programs of the Air Force, Army, Marine Corps, and Navy, which functioned during World War II, are accepted as credit when transferred from the institution where they were taken. The Committee considers for credit work done in the Air Force, Army, Coast Guard, Marine Corps, and Navy Specialized and Technical Schools where its equivalence in terms of college courses is established by proficiency examinations or where such courses have been recommended for college credit in the *Guide to the Evaluation of Educational Experience in the Armed Services* published by the American Council on Education. (See page 31 for information about General Educational Development tests.)

University Aids for Improving Students' Academic Performance

READING AND STUDY METHODS CLINIC

Training in developmental and remedial reading and efficient study methods is available to students at the Reading and Study Methods Clinic, a department of the Psychological and Counseling Center, 219 Student Services Building. The work in the Clinic is voluntary and does not carry credit. There are no fees charged for this service. Training in study methods and reading is accomplished primarily in small groups; however, individual training is provided when necessary.

SPEECH AND HEARING CLINIC

The clinical facilities and services of the Speech and Hearing Clinic, 601 East John Street, are available for examination, consultation, and therapy. Free services are extended to University students who have impaired hearing, speech deviations, or language problems. Students may call for information, or they may be referred by instructors or other interested individuals.

ENGLISH WRITING CLINIC

Any student who is not enrolled in a freshman rhetoric course and who has a writing problem (e.g., spelling, organization, punctuation) may consult the English Writing Clinic, 311 English Building. Office hours are from 8:00 a.m. to 12:00 noon and 1:00 to 5:00 p.m. Monday through Friday. All work in the Clinic is done in individual conferences, and attendance is voluntary. A student may seek help on his own initiative, or he may be referred to the Clinic by his instuctors or by the dean of his college.

WRITING LABORATORY

The Writing Laboratory (Rhetoric 103) is open to any Special Educational Opportunity Program student in conjunction with his regular rhetoric courses. If possible, classes are limited to no more than four students. They may enroll on their own initiative or be referred by their rhetoric instructor.

The course meets two hours a week and the student receives one semester hour of credit on a Satisfactory/Unsatisfactory basis. One hour a week is devoted to a systematic study of grammar and the basic principles of writing. The other hour is devoted to the individual writing problems of the student. The course may be repeated for a total of two semester hours of credit.

Although Rhetoric 103 is designed primarily as an adjunct to Rhetoric 101, 102, and Speech 111, 112, the Writing Laboratory offers assistance on papers and reports assigned in any other course.

SUPPORTIVE INSTRUCTION

Academic assistance is available to students in need of it, as described on page 72. A number of departments have established special courses and/or special sections in existing courses for this purpose, and a faculty and student tutoring system has been developed.

STUDENT SERVICES

Counseling Services

A number of people at the University try to help each student obtain maximum benefit from his University career and develop to his full potential. At registration time, a special adviser appointed by his college helps the student select and arrange his courses. Deans of colleges, heads of departments, and other faculty members devote much of their time to advising students on classroom work and programs.

Matters of student welfare outside the classroom are handled chiefly by the Director of Admissions and Records, the Dean of Students, and the Psychological and Counseling Center. Offices of the Director of Admissions and Records are in the Administration Building, and the offices of the Psychological and Counseling Center and most divisions of the office of the Dean of Students are centralized in the Student Services Building.

The Director of Admissions and Records, through correspondence and personal conferences, provides general information about the University and specific information about admission, registration, and costs. He is in charge of student academic records. Jointly with the Dean of Students, he administers selective service regulations pertaining to students.

The Dean of Students is in charge of most matters of student welfare and activities. As part of his organization, the offices of Student Programs and Services, Student Personnel, and Housing provide general advisers from whom students may seek assistance and opinion. These advisers help with problems of personal adjustment to campus life, registration, suitable housing, part-time employment, budgeting expenses, loan funds and scholarships, activities, fraternity and sorority pledging, and interpretation of University rules. Their offices are open throughout the day, and staff members are always on call for emergencies. Any student may go to them, and inquiries from parents and guardians are welcomed.

The Psychological and Counseling Center provides students with some of the best professional counseling and scientific aptitude testing services available. Through these services the student can secure information about his abilities, interests, and personality, which will enable him to select more wisely a course of study and a later vocation. These services are available during the summer before he registers and any time during his University career. The Couseling Center provides special help for those who do not concentrate as well, read as rapidly, or study as efficiently as they are capable of doing. The trained counselors and psychologists on the staff also help with personal and psychological problems, such as over-nervousness on examinations, lack of confidence, or with other worries and conflicts which could interfere with a successful and happy life. Students are invited to make use of the services of the Center at any time.

The Illini Union

The Illini Union is the University's campus community and recreation center. It is a common gathering place for students and faculty to meet with one another, to develop leisure-time interests, and to carry on a program of activities outside the classroom. All students may participate in the social and recreational programs sponsored by Illini Union Student Activities. The Illini Union is also used for conferences, short courses, and meetings sponsored by University departments, and for functions of other organizations whose purposes are of an educational nature or in the public interest.

The Illini Union's activities start the first few weeks of school with open houses, mixers, and Activity Day. Through the committee structure of Illini Union Student Activities, the Illini Union promotes such annual events as Homecoming, International Fair, Spring Musical, Mom's Day, Dad's Day, and Illioskee and provides a year-round

program of concerts, art shows, movies, dances, tournaments, and nationally known speakers.

Through this well-considered program, the Illini Union enables students to plan, organize, and carry out activities designed to serve the cultural, recreational, and social interests of the general University student body and staff. Information on Illini Union Student Activities and committee applications are available in Room 284 Illini Union.

The Illini Union provides a cafeteria, a snack bar, waiter-service dining rooms, a vending service dining room, bowling lanes and a billiard room, art galleries, a browsing library, two bookstores, student organization offices, an information and tour office, a merchandise sales counter, a ticket office, University lost and found service, checkrooms, a duplicating and sign making service, lounges, guest rooms, and numerous multipurpose rooms for luncheons, dinners, dances, and meetings.

Financial Aids

Scholarships and Grants

Each student who attends a state-supported college or university is the recipient of a type of scholarship represented by the educational subsidy provided by the legislature out of tax funds. This large contribution toward the cost of instruction and facilities makes possible greatly reduced charges for tuition and fees.

Some 11,397 undergraduate and professional students who were enrolled on the Urbana-Champaign campus of the University of Illinois during the 1969–1970 academic year received additional scholarship and grant aid from various sources which included scholarships and grants awarded by the Committee on Financial Aid to Students, those established by state statutes, and those awarded by agencies outside the University. More than 1,600 of these students received more than one award. About one-fourth of the recipients were freshmen. The majority of these were for tuition only, valued at $123.00 per semester for Illinois residents, but many students received awards ranging up to $800.00, with a number of larger amounts. The average value of scholarship and grant assistance was $198.00 per semester.

It is estimated that the total scholarship and grant assistance available to all undergraduate and professional students on the three campuses of the University in 1969–1970 had a value of approximately $4,537,018.

Unless otherwise stated, an undergraduate scholarship or grant covers the tuition fee in any department of the University. For more detailed information, apply to the Director of Student Financial Aids.

SCHOLARSHIPS AWARDED ON THE BASIS OF A COMPETITIVE EXAMINATION

A number of scholarships are awarded annually in each county on the basis of a competitive examination. The examination is of the objective type and is designed to measure abilities which predict success in the University. It is based on knowledge and skill normally acquired before completion of secondary education.

Students should make inquiry of their county superintendent of schools or high school principal or counselor no later than March 1 during their junior year in high school concerning the date and place of the examination for scholarships to begin in June or September following their graduation from high school. Application for any of the following scholarships, which are awarded on the basis of this examination, should be made to the county superintendent of schools of the county in which the applicant resides. Unless otherwise stated, all the scholarships can be used only at the University of Illinois. All are of equal value and exempt the holder from tuition. They do not cover other fees.

County Scholarships. Two County Scholarships are awarded to the highest ranking candidates in each county.

Value: Tuition waiver for four years.
Scope: May be used in any course at the University of Illinois, Southern Illinois University, state colleges and universities under jurisdiction of the Board of Governors, and Regency Universities under jurisdiction of the Board of Regents.
Eligibility: Candidate must be a resident of Illinois and of the county where application is made. Awarded to high school graduating seniors or to high school graduates; individuals who have had any college-level work after high school graduation are not eligible.

Special County Scholarships. Additional scholarships are awarded in counties with populations in excess of 100,000.
Value: Tuition waiver for four years.
Scope: May be used in any course at the University of Illinois.
Eligibility: Candidate must be a resident of Illinois and of the county where application is made. Awarded to high school graduating seniors or to high school graduates; individuals who have had any college-level work after high school graduation are not eligible.
Limitations: Special County Scholarships are suspended if the holder is placed on probation and cancelled if he is dropped by the University.

Agriculture and Home Economics Scholarships. One scholarship in agriculture and one in home economics is awarded in each county to the candidate in each group ranking highest on the examination.
Value: Tuition waiver for four years.
Scope: Limited to agriculture or home economics courses at the University of Illinois.
Eligibility: Candidate must be a resident of Illinois and of the county where application is made. High school graduates must rank in the upper 50 per cent of their class. Those with college credit must have a minimum average of 3.5 in terms of the University of Illinois grading system. *Those who have attended the University of Illinois are not eligible.*
Limitations: Agriculture and home economics scholarships are suspended if the holder is placed on probation and cancelled if he is dropped.

Veterans' Children's Scholarships. One scholarship is awarded in each county to a child of a veteran of World War I, one to a child of a veteran of World War II, and one to a child of a veteran who served at any time during the national emergency between June 25, 1950, and January 31, 1955. Preference is given candidates whose fathers are deceased or disabled. *A candidate for one of these scholarships must submit promptly evidence of his father's service (honorable discharge or photostat thereof), and an affidavit from the father or mother to establish the fact that the candidate is a child of the veteran, and whether or not the father is deceased or disabled.*
Value: Tuition waiver for four years.
Scope: May be used in any course in the University of Illinois.
Eligibility: Candidate must be a resident of Illinois and of the county where application is made. Children of veterans may compete even if they have had college work in the University of Illinois or any other college. There is no special average required for this college work.

GENERAL ASSEMBLY SCHOLARSHIPS

Each member of the Illinois General Assembly may nominate each year one student from his district for a four-year scholarship. Original nominations must be made before the beginning of the school semester. The law provides also for appointments to fill vacancies of unused portions of scholarships.
Value: Tuition waiver for four years unless the award is for the unused portion of a scholarship for less than four years.
Scope: May be used in any course in the University of Illinois.

Eligibility: Nominee must be a resident of Illinois and of the district from which he is nominated.

MILITARY SCHOLARSHIPS

A statute provides a scholarship for each veteran who served in World War I if he entered the service between April 6, 1917, and November 11, 1918, and for each veteran who served in the Armed Forces at any time after September 16, 1940, provided eligibility requirements listed below are met.

Value: Tuition waiver for four years.

Scope: May be used in any course at the University of Illinois, Southern Illinois University, state colleges and universities under jurisdiction of the Board of Governors, and Regency Universities under jurisdiction of the Board of Regents.

Eligibility: Veteran must have been honorably discharged (separated) from active service, and prior to entering active service must (a) have been a bona fide resident of Illinois, or (b) have been a bona fide resident of Illinois until at least six months prior to entering active service, have returned to Illinois within six months after leaving active service, and have resided in Illinois not less than one year immediately prior to the date of application for the scholarship, or (c) have been a student at one of the state-supported colleges or universities in Illinois at the time of entering active service. In addition, veteran must have had at least one year of active service unless he received an honorable discharge for medical reasons directly connected with such service.

STATE R.O.T.C. SCHOLARSHIPS

A state statute provides a number of scholarships for Illinois residents who have completed their work at a junior college in Illinois and who enroll in the Army R.O.T.C. program at any of the eight state-supported colleges or universities in Illinois.

Value: Tuition waiver for two years.

Scope: May be used in any course at any of the eight state-supported colleges or universities in Illinois.

Eligibility: Candidate must be a resident of Illinois and have completed all possible work at a junior college in Illinois prior to acceptance for enrollment in the Army R.O.T.C. at one of the state-supported colleges or universities in Illinois. Award is made on a merit basis to eligible candidates receiving the highest grades on a competitive examination who give evidence of leadership ability.

TEACHER EDUCATION AND TEACHER SPECIAL EDUCATION SCHOLARSHIPS

A state statute provides a number of four-year tuition waiver scholarships for high school graduates and two-year tuition waiver scholarships for students who have completed two years of junior college work, to be issued by the State Superintendent of Public Instruction to students who agree to take courses in preparation for teaching in the public schools of Illinois. Application for these scholarships should be made through the student's high school principal or dean of his junior college.

Persons who accept these scholarships must, after graduation from or termination of enrollment in a teacher education program, teach in any recognized public, private or parochial school in Illinois for at least two of the three years immediately following that graduation or termination. Any time up to four years spent in the military service and any time a person is enrolled full-time in an academic program leading to a post-graduate degree is excluded from the three-year period. Any person who fails to fulfill the teaching requirement must pay to the Superintendent of Public Instruction the amount of tuition waived by virtue of his acceptance of the scholarship together with interest at 5 per cent per year on that amount.

Value: Tuition waiver.

Scope: Limited to courses in preparation for teaching in the public schools of Illi-

nois. May be used in any course at the University of Illinois, Southern Illinois University, state colleges and universities under jurisdiction of the Board of Governors, and Regency Universities under jurisdiction of the Board of Regents.

Eligibility: Recent high school graduates who rank in the top half of their class, adult students, persons who have completed two years at a junior college in Illinois who rank in the top half of their junior college class, and Illinois residents who have received High School Equivalency Certificates with an average standard score on all General Educational Development Tests of fifty or above. Persons holding valid Illinois Teaching Certificates may, upon application directly to their county superintendent of schools, qualify for Teacher Special Education Scholarships. Only those pursuing special education curricula are eligible for the benefits of the Teacher Special Education Scholarships.

OTHER SCHOLARSHIP PROGRAMS

Illinois Department of Children and Family Services. The Illinois Department of Children and Family Services may select from the children under their care a maximum of four students each year to receive scholarships providing for waiver of tuition at any state-supported college or university in Illinois for a period of four years. In addition, the Department will provide maintenance and school expenses, except tuition, to supplement the students' earnings and other resources. The maintenance can be furnished if the students attend a university or college other than a state-supported university or college. Application for these scholarships should be made to the Illinois Department of Family Services, Springfield, Illinois.

Illinois Department of Public Aid Scholarships. The Illinois Department of Public Aid is authorized to award not more than twelve scholarships annually to needy children receiving assistance as provided in Section 6-5.6 of Article VI of the Public Assistance Code of Illinois. The Scholarships entitle the recipient to four consecutive years of study at a state-supported college or university in Illinois. At the University of Illinois, these scholarships provide for waiver of tuition but do not cover the cost of fees. The Department may make grants to supplement resources of the student to help meet other school expenses and maintenance not covered by the scholarships. Application for these scholarships should be made to the Illinois Department of Public Aid, Springfield, Illinois.

Illinois State Monetary Awards. Beginning with the 1971–1972 academic year, the Illinois State Scholarship Commission will make monetary awards to qualified students for payment of tuition and monetary fees in amounts not to exceed $1,200. These awards will be conferred upon applicants who have financial need as evidenced by data provided by the student and his family.

Any student who is a United States citizen, an Illinois resident, and will attend an approved college in Illinois in September, 1971, may obtain a monetary award application from his high school counselor, or by writing directly to the Illinois State Scholarship Commission, Box 607, Deerfield, Illinois 60015.

Fred S. Bailey Scholarships. These scholarships are administered by the University Young Men's Christian Association. Awards in varying amounts are made to "worthy moral students," men or women, at the University of Illinois. Applications are filed with the Y.M.C.A. Awards are based on superior scholarship, character, and need.

R.O.T.C. Scholarships. See pages 95, 174, 178, and 180 for a description of the financial assistance programs available to selected students enrolled in the Army, Air Force, or Navy R.O.T.C.

Other Scholarships Awarded by Agencies Outside the University. There are many scholarship programs which operate independently of any college or university. These agencies select their candidates by examination or other means, and the student is usually free to attend the university or college of his choice.

Among these are the National Merit Scholarship; Westinghouse Talent Search;

George M. Pullman Scholarships for students from Chicago; William J. Cook Scholarships for male graduating seniors from Cook County high schools; Illinois Congress of Parents and Teachers Golden Jubilee Scholarships; McCourtney Scholarships for students from Sangamon County, Illinois; and many others.

SCHOLARSHIPS AND GRANTS AWARDED BY THE URBANA–CHAMPAIGN CAMPUS COMMITTEE ON STUDENT FINANCIAL AIDS

All cash scholarships, certain tuition waiver scholarships established by the Board of Trustees, non-athletic student activity grants-in-aid, and Educational Opportunity Grants are awarded by the Urbana-Champaign Campus Committee on Financial Aid to Students. Cash scholarships and non-athletic grant-in-aid awards are made from funds donated by various individuals, firms, associations, organizations, and from bequests in wills. Substantial gifts are received each year through the University of Illinois Foundation. At the present time there are approximately 160 such funds. The Educational Opportunity Grants program is supported by the federal government.

ELIGIBILITY

The Urbana-Champaign Campus Committee on Financial Aid to Students requires that applicants have superior academic records, show financial need, and, in most cases, be residents of Illinois.

A *superior record* for a high school student means that he ranks at least in the upper 25 per cent of his high school class, or for an applicant with university credit, that he has a minimum grade-point average of at least 3.75 (roughly a B-minus average) in terms of the University of Illinois grading system. Work scholarships (see page 100) may be awarded to students with college credit who have a grade-point average of 3.5 or higher. Students already in college who have a grade-point average of 3.0 and all entering freshmen who qualify for admission to the University, may be considered for an initial Educational Opportunity Grant (see page 99). Scores on the Scholarship Aptitude Test of the College Entrance Examination Board and/or the American College Test are considered, in addition to rank in class, in the selection of freshmen scholarship recipients.

Financial need of an applicant must be shown by submission of a financial statement. Scholarship or grant funds are not awarded to students whose budgets contain expenditures which the University considers not essential to a college education. The University of Illinois participates in the College Scholarship Service of the College Entrance Examination Board and subscribes to the principle that after high scholarship has been ascertained the amount of scholarship assistance granted a student should be based primarily on financial need.

The amounts that typical families with no unusual problems should be able to provide from annual income toward each year of college, according to the College Scholarship Service formula, are:

	Number of Dependent Children				
Income *	1	2	3	4	5
$ 5,000	$ 250	$	$	$	$
6,000	530				
7,000	800	420			
8,000	1,090	630	380	220	
9,000	1,390	850	560	390	310
10,000	1,690	1,080	740	550	470
12,000	2,420	1,540	1,120	870	770
14,000	3,191	2,060	1,500	1,210	1,090
16,000	3,940	2,660	1,910	1,550	1,410
18,000	4,680	3,260	2,420	1,910	1,730

* Annual income before federal and state income tax.

Parents with a substantial amount of net assets may be expected to make a reasonable contribution from their assets in addition to the amount provided from current income. It is anticipated that students will save from $300 to $400 from summer employment to use to help meet college expenses.

Illinois residence is necessary for most scholarships; however, certain scholarships are open to nonresidents and foreign students (see pages 99 and 100).

In addition to these general requirements, some scholarships are restricted, for example, to men or to women; to freshmen, sophomores, juniors, or seniors; or to a certain area of study. It is University policy that no restriction can be made as to race or religion.

The University recognizes that each family situation is unique, and careful consideration is given to any and all special circumstances that are fully explained on the scholarship application or Parents' Confidential Statement.

APPLICATIONS

All students applying for admission or readmission who believe they meet scholarship and/or grant eligibility requirements and who wish to be given preference for an award in excess of $100, must complete the following two steps:

1. Complete the application for Financial Aid which accompanies the Undergraduate Application for Admission and Readmission form, or which may be requested from the Office of Admissions and Records. The completed Application for Financial Aid must be returned to the Office of Student Financial Aids, University of Illinois at Urbana-Champaign, 707 South Sixth Street, Champaign, Illinois 61820, prior to March 1 preceding enrollment the following September.

2. Have their parents complete a Parents' Confidential Statement by February 15 preceding enrollment the following September, and forward it to the College Scholarship Service. Forms may be obtained from high school guidance counselors or directly from the College Scholarship Service, Box 881, Evanston, Illinois 60201; or Box 176, Princeton, New Jersey 08590; or Box 1025, Berkeley, California 94701.

Students currently enrolled in the University may obtain a financial aid application form from and return completed form to:

Director of Student Financial Aids
University of Illinois at Urbana-Champaign
Room 109
707 South Sixth Street
Champaign, Illinois 61820

Most scholarships and grants awarded by the University are announced between March 15 and July 1 for the following school year. A few awards may be made after July 1. Although currently enrolled students may file financial aid applications at any time, preference is given for aid scheduled to begin in September to those students whose applications are received by March 1. Since transfer students can not file an application for admission prior to March 1 for the following September, funds are reserved for awards to qualified transfer students who apply for assistance promptly after March 1.

Applications for second semester awards may be accepted after November 1 for the following semester. Not many scholarships and grants are available for the second semester only, since most awards are made on an annual basis and are subject to renewal (provided funds are available and the student maintains the required average).

The list of available scholarships and grants on page 99 through 114, is included to show prospective applicants the range of awards. However, the wise student will apply for financial aid and let the Committee on Student Financial Aids match his qualifications with available scholarships and grants. Some of the scholarships in the list on pages 103 through 113 refer to a department or college within a particular area of study. The student may write directly to that college or department; however, all requests for information sent to the Director of Student Financial Aids will receive full attention.

Summary of Scholarships and Grants Awarded by the Urbana-Champaign Committee on Financial Aid to Students

EDUCATIONAL OPPORTUNITY GRANTS

The Federal Higher Education Act of 1965 established Educational Opportunity Grants for students from lower income families. Recipients of these grants at the University of Illinois are selected by the Committe on Financial Aid to Students from students or prospective students who file financial aid applications.

In passing this Act, Congress intended to make an education available to each student who could meet college entrance requirements, is capable of maintaining good standing and making satisfactory progress, but who because of *extremely limited finances,* could not otherwise obtain a college education except for this form of assistance.

In contrast with other scholarship and gift programs, the EOG program is an "opportunity" program. The primary intent of the EOG program is to make financial aid available in the form of grants to secondary school graduates who would be good college prospects, but who could not otherwise attend because of lack of finances. It was also intended that this aid would reduce dropouts and encourage re-entry into educational programs of those who have dropped out. EOG's can also be extended to transfer students and those already enrolled at the institution.

In the EOG program, the financial need requirements are rigorous, and are fundamental in the determination of eligibility for benefits. A student's eligibility and grant stipends are determined initially by the expected contributions from the income and assets of his parents. (See table on page 97 for general guidelines.) Therefore it is *required* that all students who wish to be considered for an Educational Opportunity Grant submit a Parents' Confidential Statement. These forms may be obtained from high school counselors or from the College Scholarship Service.

EOG's may range from $200 to $1,000, depending upon the extent of parental contribution that is possible, or that is expected, for the student's education. The government has established an absolute scale of awards that can be made, based upon his expected parental contribution and the student's savings and summer earnings, and weighed against a moderate student budget for the school year.

One other provision in making these awards is that the student must be willing to accept an equal amount of financial aid which serves as the matching portion of the grant. This matching provision calls for the use of University approved or controlled funds and could include scholarships, employment, or loans. This matching portion of the grant (with the total of all funds not to exceed the amount of a moderate student budget) can be provided from one or more of the following sources: University scholarships and grants, tuition waivers, approved loans and employment programs; state scholarships or grants; scholarships or grants offered by outside agencies or service organizations.

These renewable grants are subject to continued financial need and maintaining satisfactory academic progress.

In summary, to be eligible for an Educational Opportunity Grant, a student must:

Be a citizen of the United States.
Be a full-time student admitted or enrolled in good standing.
Demonstrate exceptional financial need.
Receive approved matching aid at least equal in amount to the EOG.
Receive total aid from all sources, including the EOG, not exceeding financial need.

TUITION WAIVER AND WORK SCHOLARSHIPS FOR SUPERIOR STUDENTS

Foreign Displaced Students Scholarships. The Board of Trustees has established fifteen scholarships covering the tuition and the service fee for displaced persons or refugees who entered the United States on or after September 1, 1956.

Foreign Student Scholarships. The Board of Trustees has established for each year twenty-five scholarships covering the tuition fee for students from foreign countries.

Applicants for these scholarships who are from the countries of South and Central America and certain other countries are selected through recommendation of the Institute of International Education. These scholarships are renewable each year for three additional years, or until receipt of a bachelor's degree, provided academic and financial need requirements are met.

Junior College Scholarships. Seventy-five two-year scholarships covering the tuition fee have been authorized by the Board of Trustees. These scholarships are awarded to graduates of junior colleges in Illinois who have superior records and show evidence of financial need.

Non-State Tuition Scholarships. The Board of Trustees has authorized the award of ten tuition waiver scholarships each year to outstanding non-state applicants who show financial need. Those approved are excused from the payment of the non-state tuition fee (now $954 a year) for a period of four years, provided they maintain a superior record in the University.

Tuition Waivers for Students from Disadvantaged Groups. Eighty to one hundred tuition waiver grants for residents of Illinois are awarded each year to students who are members of groups culturally disadvantaged as a result of racial, ethnic, economic, and/or geographical factors.

University Scholarships. Thirty-five tuition waiver scholarships for residents of Illinois are granted each year to students in departments that admit directly from high school. These scholarships are good for four years, but may be lapsed if the holder fails to maintain a satisfactory record or is dismissed from the University for any cause.

Work Scholarships for Superior Students. The Committee on Financial Aid to Students, under authority from the Board of Trustees, selects seventy-five entering freshmen each year for the Work Scholarship Program.

This program is designed to aid superior high school graduates who need substantial financial assistance. Those selected receive tuition waiver scholarships and employment by the University to enable them to earn all or a substantial amount of the cost of meals. The students are selected on recommendation of their high school principals or counselors.

These scholarships are renewed from year to year if the holders maintain superior records and give satisfaction on their jobs.

GENERAL CASH SCHOLARSHIPS AVAILABLE IN VARIOUS FIELDS OF STUDY

Alpha Delta Phi Alumni Foundation (Illinois Chapter). One four-year scholarship for a male freshman selected on the basis of activity, leadership, and academic achievement with some consideration given to financial need.

A-ti-us. Five $400 scholarships for sophomore, junior, or senior female students with acceptable academic performance records.

Nettie Atterburn. For students from Kansas Township or Edgar County, one scholarship, variable amount.

Mary Davis Barnhart (UIF).* A bequest in the will of the late Mary Davis Barnhart established this scholarship for undergraduate students. Thirty to forty scholarships in varying amounts.

Albert Bellamy. Five or six scholarships. $150 to $400 each.

Bert Bertine Memorial (UIF). One award is made each year to a male student who participates in the freshman or varsity athletic program. Amount varies.

Katherine H. Blake. A bequest in the will of the late Katherine H. Blake established this scholarship for undergraduate students. Awards are made when funds are available. Amounts vary.

* (UIF) indicates that funds are provided through the University of Illinois Foundation.

F. Stanley Boggs Memorial (UIF). Gifts from alumni and friends of the Phi Kappa Sigma fraternity established a fund, the income of which is used for scholarships for male students. Awards are based on scholarship, need and participation in activities. $100 to $600.

Henrietta Curtis Hill Braucher Memorial (UIF). Several scholarships from a bequest in the will of the late Ralph W. Braucher. Amounts vary.

Grace V. Campbell. A bequest in the will of the late Grace V. Campbell established this scholarship for boys or girls from farm homes who enroll at the University of Illinois as undergraduate students. Awards are made when funds are available. Amounts vary.

Campus Chest. Funds from Campus Chest provide for four to six scholarships. $100 to $300 each.

Bertha L. Compton Memorial. A scholarship for a young man or woman of good character, who is not a member of a fraternity or sorority. Established by Mr. Warren E. Compton in memory of his mother. $100 to $400. Recipient must agree to repay to the fund as soon as he conveniently can.

Harry Darby (UIF). Three scholarships each year from funds provided by Mr. Harry Darby. $500 each.

Delta Zeta. One scholarship from funds provided by the Alumni Association of Alpha Beta chapter for a young woman who has demonstrated qualities of campus leadership. $300.

Ralph E. Fletcher Memorial (UIF). One award made each year to a male student who is a resident of Illinois and participates in the freshman or varsity football or golf program. Tuition and fees.

Follett's. Twenty-five grants worth $100 each for the purchase of textbooks required in course work.

Foundation (UIF). About one hundred scholarships supported by gifts to the University of Illinois Foundation. $100 to $600 each.

Paul V. Galvin Memorial. Scholarships established by gifts of dealers of Motorola products to honor Paul V. Galvin, founder and president of the company. Awards vary in amount.

Maxwell R. Garret (UIF). One or more awards for students who have participated in varsity fencing or who have received freshman numerals in fencing. Amount varies but not less than the cost of tuition and fees.

General Motors. Two scholarships awarded annually to entering freshmen with preference given to students in engineering and those who anticipate careers in industry. Renewable for three years. Awards are adjusted to meet financial need.

General Undergraduate. A general fund which supports twenty to thirty scholarships each year. $100 to $600 each.

John M. and Louisa C. Gregory. Three or four awards each year awarded on the basis of competitive examination, University record, and need, to deserving students who do not use tobacco or alcohol. Awards are $100 each and not renewable.

Dunlap Harrington Memorial. An award made to a male graduating senior, who has been substantially self-supporting, to make it possible for him to enjoy fully the activities of Commencement Week. $100.

Human Resources Investment Fund (UIF). Several awards to students with extreme financial need. Amounts vary.

Jeanette E. and Benjamin F. Hunter. Ten to twelve scholarships each year awarded to young men or women from farm homes who have very high scholarship and urgent financial need. Awards are $900 a year and are usually limited to two years for an applicant.

Illini Clubs (UIF). A varying number of scholarships for freshmen from funds contributed by University of Illinois alumni clubs. Funds contributed by the various clubs are supplemented by the University of Illinois Alumni Association. Amounts vary from $300 minimum.

Illini Club of Chicago (UIF). One award annually to an entering freshman from the Chicago metropolitan area. Renewable for three years. $300.

Illini Dads Association. Eight scholarships each year. Tuition and fees.

Illini Mothers Association. A varying number of scholarships each year. Tuition and fees.

Illinois State Federation of Labor and Congress of Industrial Organizations. Two scholarships each year for children of union members affiliated with the Illinois Federation. One shall be from Cook County and one from some other county. Awards are $500 each and not renewable.

Junior Interfraternity Council. One scholarship each year for a male freshman who is a pledge or new initiate of a fraternity. $246.

William H. and Isabella A. Kane Memorial. For needy and promising students of Wellsville high schools of New York and other qualified students. Variable amounts up to total of tuition and fees.

Martin Luther King, Jr., Memorial (UIF). Several awards to students who are recipients of Educational Opportunity Grants and who are not eligible for other scholarship funds. Amounts vary.

Leo and Hilda Kolb Memorial. One scholarship for a student from Madison County, preferably from Marine Township. About $200.

Mr. and Mrs. C. G. Larned. A bequest in the will of the late Mary S. Parsons established this memorial scholarship for undergraduate students. Awards are made when funds are available.

Link-Belt Educational Fund (UIF). Sixty to seventy scholarships from the income received from Link-Belt Company stock given to the University of Illinois by an anonymous donor. Preference is given to students enrolled in the engineering or commerce curricula. $350 to $1,000 each.

Ernie Lovejoy Memorial (UIF). One award made each year to a male student who is a resident of Illinois and participates in the freshman or varsity football program.

Charles E. Merriam(UIF). Established by Charles J. Merriam in honor of his father, former Chairman of the Department of Political Science at the University of Chicago. Two scholarships of $500 each are awarded to students in the University who submit the best essays on local government. In addition, one $750 scholarship is awarded to an outstanding junior majoring in political science for use during his senior year and one $500 scholarship is awarded to an outstanding sophomore for study as a political science major during his junior year. Application for these scholarships should be submitted to the Charles E. Merriam Committee, Department of Political Science, 325 Lincoln Hall, between February 15 and March 1. Award winners are announced on June 1.

Wensel Morava. Eighteen to twenty scholarships for young men and women between seventeen and twenty-two years of age who have good health and good character. Applicants must be members of a church or Sunday school, must agree not to join a fraternity or sorority in the first two years under the scholarship, and must agree to assist some other student with his or her expenses at the University if they are financially able to do so. Preference is given to students of Czechoslovakian descent. $100 to $600 each.

Nonacademic Employees Council. Several scholarships for children of nonacademic employees at the University of Illinois. $362.

Mr. and Mrs. Edward North (UIF). Several awards to students from North Greene High School, White Hall, Illinois. Awards vary in amount.

LaVerne Noyes. About fifty men and women who are descendants of veterans of World War I receive aid to cover tuition and fees, including these costs for the nonresident student.

John W. Page Foundation. Several grants are available for male students with financial need who do not meet scholastic requirements for awards from other scholarship funds. Awards vary in amount.

James D. and Clara Phillips. One or two awards each year. $150 to $200 each.

John D. Ruettinger (UIF). Three scholarships. $150 to $200 each.

Phyllis Pierce Ruettinger Memorial (UIF). Three scholarships for women of junior or senior standing. Established by Mrs. Kitty Pierce in memory of her daughter. $150 to $250 each.

John T. Rusher Memorial. A memorial for their son established by Mr. and Mrs. Floyd E. Rusher, Peoria, Illinois, supports six to eight scholarships of $150 to $250 each. Preference is given to applicants from Peoria and Tazewell counties.

Gretchen Johanna and Paul Charles Schilling. Several scholarships not to exceed $500 each are awarded each year from the income from endowment funds.

Emerson F. Schroeder (UIF). One or two awards each year. $150 to $300 each.

Clara Y. Shaw (UIF). A substantial number of scholarships are awarded from the income from a bequest. $100 to $600 each.

Myron I. Silverman Memorial (UIF). Several scholarships, as income is available, from funds given to the University of Illinois Foundation by the University of Illinois Praetorian Alumni.

Alfred P. Sloan Foundation. Three scholarships to entering male freshmen who enroll in any field of study in the arts and sciences. Recipients must have an outstanding academic record and leadership ability. Awards vary from $200 to $900 annually, depending upon financial need, and may be renewed for three years.

Amelia Alpiner Stern. One four-year scholarship for a freshman established by the University of Illinois Mothers' Association as a tribute to Mrs. Amelia Alpiner Stern, the organizer and first president of the Mothers' Association. Awarded in 1963 and to be awarded every fourth year thereafter. $270 each year.

Student Organization Fund. Several scholarships. $150 to $350 each.

Suncoast Illini Club (UIF). One $115 scholarship to help support a qualified student from the state of Florida.

D. Alice Taylor. A bequest in the will of the late D. Alice Taylor established a fund to be used for scholarships or grants to needy and worthy students. Ten to twelve awards each year in varying amounts.

Linsey F. Ter Bush Memorial. One scholarship. Amount varies.

Dean Fred H. Turner (UIF). Established by the Interfraternity Council and Panhellenic Association to honor the first Dean of Students at the University of Illinois. Two scholarships awarded annually to second semester freshmen, or to sophomores, juniors, or seniors affiliated with a Greek social fraternity or sorority. $250 each.

Verdell-Frazier-Young Memorial. Several awards each year to women, with preference given to those who have had their education interrupted and intend to return, or have returned, to college for work toward completion of an undergraduate degree. Part-time students, married students, and foreign students are eligible for this scholarship. Amounts vary.

Earl C. and Lawrence L. Voodry. One scholarship. About $150.

Manierre Barlow Ware. A memorial established for Manierre Barlow Ware by his mother provides two scholarships each year for male students, preferably in the College of Agriculture. $150 to $250 each.

Arthur Cutts Willard Memorial (UIF). One or more awards in any field of study for worthy senior students who have demonstrated scholastic ability and have established records of good character and dependability. Established by former students, friends, and admirers of Dr. Arthur Cutts Willard, ninth president of the University of Illinois, who died in 1960. $500 each.

Women's League. Income from fund supports one or two scholarships for women. $150 to $200 each.

Etta and Laura Beach Wright (UIF). A substantial number of scholarships are available from the income from a bequest. $250 to $300 each.

Harry G. and Harriette A. Wright. Twenty to thirty scholarships of $200 to $400 plus tuition and fees. Preference for students in agriculture and related fields and also for residents of DeKalb, Lee, Randolph, and Whiteside counties. $470 to $670 each.

G. A. Yanochowski (UIF). Established by James J. Polizzi as a memorial to G. A. Yanochowski. One scholarship each year. $300.

SCHOLARSHIPS AVAILABLE IN CERTAIN FIELDS OF STUDY

AGRICULTURE AND HOME ECONOMICS

Agrico Chemical Company. One scholarship for a student enrolled in the agricultural industries curriculum. $600.

Agriculture Alumni Fund (UIF). One or more awards each year to students in agriculture. Amounts vary.

Agriculture and Home Economics Tuition Scholarship. See page 94 for further information.

James A. Bauling Memorial. One scholarship for a junior or senior majoring in agronomy or who plans to do advanced work in plant pathology. $200 to $250.

Borden Company. One scholarship for the senior in the College of Agriculture who has attained the highest average during his first three years of work and one for the senior in home economics who has the highest average and has completed at least two courses in foods and nutrition. $300 each.

Miles W. Bryant. One or more scholarships for students majoring in ornamental horticulture from funds provided by the Illinois State Nurserymen's Association. $300 each.

Chicago Farmers. One scholarship is awarded to a junior in argiculture for the use of the student during his senior year. $500.

Chicago Mercantile Exchange. One scholarship in agriculture is awarded to an entering male freshman from Illinois. $250.

Continental Grain Foundation. The Foundation provides $1,000 for scholarships in agriculture. Preference is given to students in agricultural marketing. Awards vary in amount.

Herbert R. Damisch Memorial. One scholarship for a junior or senior in vocational agriculture. $250.

K. J. T. Ekblaw (UIF). One scholarship awarded in alternate years to a sophomore in the College of Agriculture or in the College of Engineering who is majoring in agricultural engineering. Established by Alma H. Morehouse to honor her father, K.J.T. Ekblaw, a member of the faculty in agricultural engineering, 1900–1916. $300.

Farmland Industries (Farmers' Co-op at Lincoln). Two $400 a year scholarships; one to a junior and one to a senior.

Federal Land Bank Association. Two scholarships for freshman men entering the College of Agriculture. $500 each.

Food Science—Various Donors. Several grants to entering freshmen in the food science curriculum which are renewable provided the student maintains a "C" or better average each semester. $250 each year.

FS Services, Inc. One scholarship for a junior in the College of Agriculture with a rural background. Preference is given to students in the agricultural industries curriculum. Renewable through the senior year. $400.

General Foods Fund Inc. Three $400 agriculture scholarships for freshmen. Two in food science; one in dairy science, agronomy, or microbiology.

David M. Hardy. Funds provided by the St. Louis Bank for Cooperatives for one scholarship for a male junior, senior, or graduate student who is interested in the possibility of employment by a farmers' cooperative marketing, purchasing, or credit association. The recipient must be enrolled in agricultural, business, or agricultural business courses acceptable for credit toward a degree in the field of agriculture or business. $500.

Fred E. Herndon Agricultural Industries. Funds provided by the Illinois Farm Supply Company for two or three scholarships for juniors or seniors in the agricultural industries curriculum. Awards vary in amount.

Illinois Homemakers Extension Federation. Two scholarships for students enrolled in the home economics curriculum. $250 each.

Illinois Production Credit Association. Four scholarships for junior or senior students in the College of Agriculture. Preference is given to students who have exhibited an interest in farm credit. $150 each.

Illinois Society of Professional Farm Managers and Rural Appraisers Memorial. Awards are made with preference to students majoring in farm management and/or rural appraisal. Awards vary in amount.

Kunkle-Andersen. Several scholarships are awarded each year to entering freshmen in an agricultural curriculum. Funds are provided through income from a $25,000 endowment. At least one-third of the annual income shall be awarded to a student or students residing in Marshall or Putnam county, Illinois. The balance of the income may be awarded to other eligible students who are residents of Illinois. Amounts vary.

Max Monblatt. One scholarship each year to a student enrolled in the horticulture major or ornamental horticulture curriculum. $200 to $300.

Moorman Manufacturing Company. Four or more scholarships for male students in agriculture. Awards are based on scholarship, character, financial need, and interest in agriculture. $400 each.

Ralston Purina. One scholarship for a junior or senior in the College of Agriculture who ranks in the upper 25 per cent of his class. $500.

Bryan Reardon. Several scholarships for students specializing in soil building. About $250 each.

Sears Roebuck Foundation. Three scholarships are available to freshmen or upperclassmen who are residents of Illinois and who are enrolled in a home economics curriculum in the College of Agriculture. Amounts vary with minimum of $200.

Seitzinger Memorial (UIF). One scholarship in agriculture to be awarded every fifth year beginning in 1967–1968. $200.

William Stack Memorial. One scholarship each year to a student majoring in agronomy or a related field. $250.

Texaco Incorporated. Three scholarships for sophomores, juniors, or seniors enrolled in certain engineering curriculums, or who are majoring in agronomy, physics, geophysics, mathematics, chemistry, or chemical engineering. Average award of about $385.

Wood Industries—Various Donors. Several scholarships are available to freshmen entering the wood technology and utilization curriculum. $300 to $500 each.

COMMERCE AND BUSINESS ADMINISTRATION

George V. Carracio (UIF). Two or three scholarships for students in the College of Commerce and Business Administration with preference given to graduates of Lyons Township High School. $300 to $500.

First Federal Savings and Loan Association of Champaign, Illinois. One scholarship for a sophomore, junior, or senior student who is a resident of any county in Illinois outside of Cook County with preference given to residents of Champaign County. $500.

FS Services, Inc. One scholarship for a resident of Illinois with junior standing enrolled in the field of general business. Renewable through the senior year. $400.

David M. Hardy. Funds provided by the St. Louis Bank for Cooperatives for one scholarship for a male junior, senior, or graduate student who is interested in the possibility of employment by a farmers' cooperative marketing, purchasing, or credit association. The recipient must be enrolled in agricultural, business or agricultural business courses acceptable for credit toward a degree in the field of agriculture or business. $500.

Wayne A. Johnston Memorial. One or two scholarships for a student enrolled in an economics curriculum who has elected a transportation option. Preference is given to children of the Illinois Central Railroad employees. $600 to $1,200 each.

Link-Belt Educational Fund (UIF). Sixty to seventy scholarships from the income received from Link-Belt Company stock given to the University of Illinois by an anonymous donor. Preference is given to students enrolled in the engineering and commerce curricula. $350 to $1,000 each.

G. A. Mavon Memorial. One scholarship for a resident of Illinois with junior standing who plans a career in the field of insurance, preferably in the agency ranks. Renewable for the senior year. $500.

Hiram T. Scovill. Fund to honor Professor Emeritus Hiram T. Scovill provides several scholarships for students in the College of Commerce and Business Administration based on financial need and scholastic ability. $200 to $400 each.

Seitzinger Memorial (UIF). One scholarship awarded every fifth year beginning in 1966–1967 to a student in the College of Commerce and Business Administration. $200.

Max Tepper Memorial (UIF). One scholarship for a sophomore enrolled in the College of Commerce and Business Administration or the College of Engineering. Preference is given to residents of counties in east central Illinois. $500.

COMMUNICATIONS

Donald E. Chamberlain. One scholarship for a journalism student aiming toward a career in newspaper reporting or editing. $300.

Frank E. Gannett Newspaper Foundation, Inc. One scholarship for a student completing the junior year who has exhibited promise of success in the field of journalism. $500.

Hazel Mann Memorial. One or two scholarships sponsored by the Junior Women's Advertising Club of Chicago for junior women in the curriculum in advertising. $270 to $540 each.

Shirley K. Strout. One scholarship for a member of Theta Sigma Phi (women's professional journalism fraternity) who is completing her junior year. $250.

EDUCATION

Illinois Congress of Parents and Teachers. Fifteen to twenty scholarships for students preparing to teach. $200 to $400 each.

In addition, a number of awards are made to students who are preparing to teach deaf and mentally retarded children. Only students pursuing curricula in special education are eligible for these awards.

Seitzinger Memorial (UIF). One scholarship awarded every fifth year beginning in 1968–1969 to a student in the College of Education. $200.

Teacher Education and Teacher Special Education Scholarships. See page 95 for further information. Recipients of these scholarships must be enrolled in a teacher education curriculum in order to receive benefits of the scholarships.

ENGINEERING

Aerojet-General Corporation. One four-year scholarship for a freshman in ceramic engineering. Awarded in 1963 and to be awarded every fourth year thereafter. $500 each year.

Alcoa Foundation. Four scholarships, one for a senior in ceramic engineering, two for seniors in mechanical engineering, and one for a senior in metallurgical engineering. $750 each.

Hilda J. Alseth (UIF). Two or three scholarships for undergraduates in the College of Engineering from a bequest in the will of Hilda J. Alseth to the University of Illinois Foundation. $300 to $600 each.

A. I. Andrews. One scholarship for a student in ceramic engineering. $300.

Autotron, Inc. One scholarship annually for a sophomore in the electrical engineering curriculum with a major in electronics. Renewable for junior and senior years. $650.

Frank W. Bauling Memorial. One scholarship for a junior or senior enrolled in agricultural engineering in either the College of Agriculture or the College of Engineering. Established by Mr. and Mrs. Frank E. Bauling as a memorial to their late son, an honor student at the University. $200 or $250.

Bates and Rogers Foundation. One scholarship annually to a senior student in civil engineering. $650.

The Boeing Company. Four scholarships for students in aeronautical, mechanical, civil, or electrical engineering with preference given to juniors or seniors. Recipients must be residents of Illinois. $216 each.

Capitol Machinery Company, Inc. One scholarship in civil or mechanical engineering for a student from counties served by the company. $450.

Caterpillar Tractor Company. Five scholarships, three for students in metallurgical engineering and two for students in mechanical engineering. $500 each.

Ceramic Engineering. Awards of $400 to freshmen in ceramic engineering, renewable at $500 a year for sophomore year only if the holder maintains a superior scholastic average.

Champion Spark Plug. One scholarship for a student in ceramic engineering, renewable until graduation. $500.

Alfred Crossley Associates, Inc. One scholarship for a student in electronics or physics was awarded in 1960 and is to be awarded each third year thereafter. $300.

John Deere. One scholarship annually for a student in metallurgical engineering. $350.

Douglas Aircraft Company, Inc. One scholarship for a senior in aeronautical or electrical engineering in this order of preference. $750.

Dow Chemical Company. One scholarship for a student in metallurgical engineering. $500.

K. J. T. Ekblaw (UIF). One scholarship awarded in alternate years to a sophomore in the College of Agriculture or in the College of Engineering who is majoring in agricultural engineering. Established by Alma H. Morehouse to honor her father, K. J. T. Ekblaw, a member of the faculty in agricultural engineering, 1909–1916. $300.

Emhart Manufacturing Company. One scholarship for a freshman in ceramic engineering was awarded in 1962 and is to be awarded each fourth year thereafter. Renewable through the senior year. $500.

Fansteel Metallurgical Corporation. Three scholarships for students in metallurgical engineering, preferably freshmen, without regard to financial need. $500 each.

Ferro Corporation. Two scholarships for students in ceramic engineering with preference first to transfer students and second to entering freshmen. $300 each.

Foundry Educational Foundation. Varying number of scholarships for students interested in the foundry industry. $200 to $300 each.

R. Jaccoud Franklin. One scholarship for a student in civil engineering from funds provided annually by Mr. R. Jaccoud Franklin, a 1937 graduate in civil engineering. $500.

Freshman Scholarships in Engineering. Scholarships are available to entering freshmen with high scholastic ability and demonstrated superiority in mathematics and science who show evidence of financial need. Renewable through the senior year. $350 to $1,000.

General Engineering. One scholarship to a freshman in general engineering from funds provided by alumni of the department. $500.

Globe-Union Foundation. One scholarship in ceramic engineering is awarded to an entering freshman, renewable for the sophomore, junior, and senior year. $500.

Harbison-Walker. One scholarship awarded every four years to a freshman in ceramic engineering. Renewable through the senior year. $500 a year.

Illinois Mining Institute. One scholarship annually for a student in general engineering enrolled in the mining and geological engineering option. $600.

Inland Steel Company. Three scholarships annually for students in metallurgical engineering. $500 each.

Wayne A. Johnston Memorial. One or two scholarships for a student enrolled in the civil engineering curriculum who has elected a transportation option. Preference is given to children of the Illinois Central Railroad employees. $600 to $1,200 each.

Kaiser Aluminum and Chemical Corporation. Four scholarships annually for students in metallurgical engineering. $500 each.

Link-Belt Educational Fund (UIF). Sixty to seventy scholarships from the income received from Link-Belt Company stock given to the University of Illinois Foundation by an anonymous donor. Preference is given to students enrolled in the engineering and commerce curricula. $350 to $1,000 each.

Magnavox Foundation. Two scholarships for juniors or seniors in mechanical engineering or the communications area in electrical engineering. $500 each.

Metallurgical Education Fund. A fund supported by industrial grants for awards up to $500 a year to students in metallurgical engineering. Awards are renewable on the basis of satisfactory academic performance.

Minnesota Mining and Manufacturing Company. Three scholarships for upperclassmen with preference for students in electrical, mechanical, and chemical engineering. $400 each.

Herman W. Nelson. Two $500 scholarships, one for a junior and one for a senior in mechanical, electrical, or general engineering.

Calvin Barnes Niccolls Memorial Fund (UIF). Ten to twenty scholarships from the income from a bequest in the will of Mary Hall Niccolls to the University of Illinois Foundation. For male students at any class level in any field of engineering. $350 to $1,000 each.

Olin Mathieson. One scholarship for a student in metallurgical engineering. $500.

Owens-Corning Fiberglas Corporation. Two scholarships, one for a junior or senior in ceramic engineering, and one for a junior or senior in mechanical, electrical, or chemical engineering. $500 each.

C. W. Parmelee. A limited number of scholarships in ceramic engineering. The value is adjusted to funds available.

Pennsylvania Glass Sand Corporation. One scholarship for the senior year for the student in ceramic engineering who has the highest average for the junior year's work. Tuition and fees.

Pfaulder Permutit Foundation. One scholarship for an outstanding freshman in ceramic engineering. $500.

Franklin McRae Phillips Memorial. One scholarship awarded in alternate years to a student in any curriculum in the College of Engineering. Established by his family to honor Franklin McRae Phillips, class of 1932. $300.

Charles S. Pillsbury Memorial (UIF). A fund established by the Chicago Bridge & Iron Company in honor of Charles S. Pillsbury to provide scholarships for students in engineering. Amounts vary.

Theodore R. Schlader Memorial. A varying number of scholarships for students in architecture or architectural engineering, and in electrical engineering or other engineering fields. $300 each.

Schlumberger. One scholarship in electrical, mechanical, or petroleum engineering or physics or geology for a junior or senior who has included at least twelve hours of course work in electricity in his degree program. $1,000.

Frederick D. Secor Memorial. A varying number of scholarships for electrical engineering students. $200 to $300 each.

Seitzinger Memorial (UIF). One scholarship awarded every fifth year beginning in 1969–1970 to a student in ceramic engineering. $200.

Shedd-Vawter (UIF). One or more scholarships for students in civil engineering as income from an endowment fund permits. Amounts vary.

Grant Warren Spear Memorial. Six scholarships from the income from a bequest in the will of Emily F. Spear to the University of Illinois Foundation in memory of her father, Grant Warren Spear. For students in any curriculum in the College of Engineering. $350 to $1,000 each.

David B. Steinman (UIF). One scholarship to a junior or senior in civil engineering. $500.

Sundstrand Foundation. One scholarship awarded every fourth year to a freshman in electrical, industrial, mechanical, or metallurgical engineering with preference given to students who are residents of Rockford or LaSalle, Illinois, or of northern Illinois counties. The scholarship is renewable for three additional years. $500 each year.

Sverdrup and Parcel. One scholarship to a sophomore in civil engineering renewable for the junior and senior year. $600.

Max Tepper Memorial (UIF). One scholarship for a sophomore enrolled in the College of Commerce and Business Administration or the College of Engineering. Preference is given to residents of counties in east central Illinois. $500.

Universal Oil Products. Two scholarships for upperclassmen enrolled in a civil or mechanical engineering curriculum. $250 each.

Alex Van Praag, Jr. A varying number of scholarships for students in civil or sanitary engineering. Established by Mr. Alex Van Praag in memory of his son. $200 to $300 each.

Western Electric Fund. Three scholarships of tuition, fees, books, and supplies for students in engineering. $500 each.

Earle J. Wheeler (UIF). A varying number of scholarships for junior or senior civil engineers. $300 to $400.

Wyman-Gordon Company. Two scholarships for juniors or seniors in metallurgical engineering. $500 each.

Leigh F. J. Zerbee. A varying number of scholarships for students enrolled in civil engineering who are also specializing in military science. $500.

FINE AND APPLIED ARTS

William Anderson. Several scholarships for talented men or women students already registered in the School of Music. Competitive auditions are required. Awards are usually for tuition, but amounts may vary.

Lydia E. Parker Bates. About thirty-five scholarships in architectural engineering, architecture, art, dance, landscape architecture, theatre, and urban and regional planning. Awards are up to $400 for Illinois residents and up to $600 for nonresidents.

A. Epstein Memorial (UIF). One scholarship for a student enrolled in the architecture or architectural engineering curriculum. $500.

Junior Service League of Champaign-Urbana (UIF). One or two scholarships for students enrolled in the art curriculum. $100 each.

Theodore Presser Foundation. One scholarship awarded every fourth year to a freshman in the School of Music. Renewable for the sophomore, junior, and senior years. Competitive auditions are required. $400 each year.

Theodore R. Schlader Memorial. Varying number of scholarships in architecture, architectural engineering, and other engineering fields. Up to $400 each.

Warren H. Schuetz Memorial (UIF). An annual scholarship of $100 is awarded to an outstanding student in music education who has been admitted to advanced standing in teacher education.

Thomas J. Smith. Four tuition scholarships are awarded each year to women residents of Illinois who are registered in the School of Music. Competitive auditions are required.

Frederic B. Stiven. Several one-year scholarships for students in the School of Music. Competitive auditions are required. $100 to $200 each.

LAW

Scholarships in law are available exclusively to students enrolled in the College of Law. Applications should be made to the Dean of the College by March 15.

Beginning Law Students. A number of scholarships are available from the College of Law for beginning students who have outstanding undergraduate records and LSAT scores and who are in financial need. These awards are renewable if the student maintains a satisfactory law average. Except as otherwise noted, most scholarships range between tuition and fees only and tuition and fees plus $1,000. Sources of these awards include:

University Scholarships. Tuition plus $250.

Chicago Title and Trust Company Foundation (UIF).

Hiram W. Belnap Memorial. An endowment fund created in 1969 by Nuel D. Belnap, class of 1916, in honor of his father.

Franklin H. Boggs Memorial (UIF). Provided by annual gifts from Mrs. Elizabeth Boggs Meadows in memory of her father.

Robert N. Erskine Memorial (UIF). Provided by matching grants from Donald E. Erskine, an alumnus of the College of Law, and the SCM Corporation.

Albert J. Harno Memorial (UIF). An endowment fund established by alumni and friends in honor of the late Albert J. Harno, Dean of the College of Law from 1922 to 1957.

Lott R. Herrick Memorial (UIF). Created in memory of a justice of the Supreme Court of Illinois (1933–1937).

Law School Fund (UIF). Supported by annual gifts from College of Law alumni and friends.

Associaton of Lawyers' Wives of St. Clair County. An annual award of $400 made to a second-semester junior or a first-semester senior who is a resident of St. Clair County, Illinois, and intends to return there to practice law upon graduation. Those eligible should see the Assistant Dean.

Dow Chemical Patent Law Scholarship. Awarded annually to a beginning student at certain midwestern law schools who desires to become a patent lawyer, and whose undergraduate major is chemistry, pharmacy, or chemical engineering. Applications available from the deans of the participating law schools.

Weymouth Kirkland. Available to residents of Illinois, Indiana, Iowa, Michigan, and Wisconsin for study at a law school located in one of these states. The deadline for receipt of applications in 1969 was March 24. Tuition plus up to $800 per year. Not available to students already attending law school. Renewable. For further information, write the Weymouth Kirkland Foundation, Suite 2900, Prudential Plaza, Chicago, Illinois 60601.

Phi Alpha Delta. Phi Alpha Delta Fraternity makes fifteen $500 scholarships available nationally each year. Students who have completed two years of law school and who are members of the fraternity may be eligible. Applications and further information are available from the Faculty Adviser or Chapter Justice.

Winnebago County Bar Foundation. An annual award made to a law student who is a resident of Winnebago County, Illinois. Request further information from Jane Tull, Executive Secretary, Suite 503 Empire Building, 206 South Main Street, Rockford, Illinois 61101.

Women's Bar Association of Illinois. One award is made annually to an outstanding woman student beginning her second or third year of law study at an Illinois law school. Based on recommendations from deans of Illinois law schools.

Students from Disadvantaged Groups. The College has initiated a program designed to increase the opportunities for legal education for individuals who are members of groups culturally disadvantaged as a result of racial, ethnic, or geographical factors. Students who are members of such a group may be eligible for admission as Illinois Equal Opportunity Law Fellows. Fellowships include financial, tutorial, and other assistance.

Other Scholarships. College of Law students are also eligible for certain scholarships available to other University students, such as the State Farm Companies Foundation Fellowships, the Fred S. Bailey Scholarships, the Verdell-Frazier-Young Award, Illinois General Assembly Scholarships, and others.

Grants. The College of Law makes awards ranging from $100 to $1,000 to second- and third-year students in good standing on the basis of financial need. The recipients assume a moral obligation of repayment following graduation.

LIBERAL ARTS AND SCIENCES

Alcoa Foundation. One $750 scholarship in chemical engineering to be awarded on the basis of achievement.

Chrysler Corporation. Several scholarships for students in the chemical engineering curriculum. Amounts vary.

School of Chemical Sciences. A number of $500 scholarships to outstanding freshmen registered in chemistry and chemical engineering, from an endowment fund established to honor Professor *Emeritus* Roger Adams. One scholarship is a memorial to Professor Ludwig F. Audrieth, and several scholarships are supported by the E. I. duPont de Nemours Company. Awarded primarily on the basis of superior scholastic achievement in secondary school with some consideration given to personal qualifications. Applications for Illinois residents may be obtained from secondary school guidance counselors. Out-of-state residents can write directly to the School of Chemical Sciences. Application deadline is February 15. Acceptance for admission to the College of Liberal Arts and Sciences is a prerequisite for these scholarships.

James Buchanan Duke. One scholarship to a student majoring in Russian and one scholarship to a student majoring or minoring in Russian Language and Area Studies are awarded upon recommendation of the University of Illinois Center for Russian Language and Area Studies. $300 each.

East Central Illinois Society of Plastic Engineers. One scholarship for a junior or senior enrolled in the chemistry or chemical engineering curriculum. Recipient must be a resident of certain counties in east central Illinois or of Sullivan or Vigo counties in Indiana. $250.

Lois Shepherd Green. Several scholarships for students studying philosophy. $100 to $400 each.

Dr. Hartwell C. Howard Memorial. About fifteen scholarships for premedical and predental students. Established by Dr. Charles P. Howard in memory of his father. $250 to $500 each.

Link-Belt Educational Fund (UIF). Sixty to seventy scholarships from the income received from Link-Belt Company stock given to the University of Illinois Foundation by an anonymous donor. Preference is given to students enrolled in the engineering and commerce curricula. $350 to $1,000 each.

Minnesota Mining and Manufacturing Company. Three scholarships for upperclassmen with preference for students in electrical, mechanical, and chemical engineering. $400 each.

Owens-Corning Fiberglas Corporation. Two scholarships, one for a junior or senior in ceramic engineering, and one for a junior or senior in mechanical, electrical, or chemical engineering. $500 each.

Peter F. Rossiter Memorial (UIF). Several scholarships awarded annually from the income from an endowment fund to students who are majoring in political science. Amounts vary.

Standard Oil Company of California. One scholarship for a student in chemical engineering. $750.

Stauffer Chemical Company. One or two scholarships awarded annually to seniors in the chemical engineering curriculum on the basis of academic achievement.

Fred E. Sweitzer (UIF). Two $500 scholarships. Preference is given to applicants of Washington Community High School; may be extended to other high schools of Tazwell County.

Universal Oil Products. Three scholarships for upperclassmen in chemical engineering. $500 each.

OCCUPATIONAL THERAPY

Illinois Federation of Women's Clubs. Varying number of scholarships for students in occupational therapy are supported by the Illinois Federation of Women's Clubs and by the Illinois Federation of Women's Clubs, Third District. Up to $200 a semester in Urbana and $100 a quarter in Chicago.

Illinois Occupational Therapy Alumni Association. Scholarships are awarded to students in the occupational therapy curriculum as funds become available. Awards vary in amounts.

Other Scholarships in Occupational Therapy are supported by the Illinois Association for the Crippled, the Illinois Occupational Therapy Association, the United Cerebral Palsy Association, and the United States Vocational Rehabilitation Administration. Amounts vary.

PHYSICAL EDUCATION

John Bruce Capel Memorial (UIF). An award is available each year to an undergraduate student in recreation and park administration. Amount varies.

Carita Robertson. One scholarship of $200 or two of $100 each are awarded each year to junior or senior students in the undergraduate professional preparation program in physical education for women.

Robert C. Zuppke. Several scholarships for male students in the general curriculum in physical education who are residents of Illinois. These scholarships cover tuition and fees.

VETERINARY MEDICINE

Students in the College of Veterinary Medicine are eligible to apply for undergraduate scholarships not restricted to a particular field of study during their first four years of college work. These scholarships are described in the preceding paragraphs under the Financial Aids section of this catalog. Applications should be submitted directly to the Director of the Undergraduate Scholarship Program.

Applications for the following scholarships available exclusively to students enrolled in the College of Veterinary Medicine should be made to the Dean of the College by March 1.

Chain O'Lakes Kennel Club. One scholarship given annually for a student in the College of Veterinary Medicine. $362.

Anna M. Gulick. Income from a bequest is available for a student of exemplary habits and character and demonstrated financial need. Amount of award varies.

Health Professions Scholarship Programs. Full-time students enrolled and in good standing or accepted for enrollment in the College of Veterinary Medicine are eligible for consideration of scholarship/grant assistance if need for such assistance can be demonstrated. (See page 97 for discussion of Financial Need.) Applicants receiving such awards will generally be expected to accept a Health Professions Student Loan as part of their financial aid award. (See page 122 for details.) Combinations of scholarship/grant and loans are limited to a maximum of $2,500 per year.

Dr. H. Preston Hoskins. This scholarship is given annually, in the spring, to the student editor or editors of the *Illinois Veterinarian* magazine for the ensuing year. The Illinois State Veterinary Medical Association and the Chicago Veterinary Medical Association sponsor this $200 award.

Illinois Racing Board. Six scholarships are available for second- and third-year veterinary medical students. Awards are based on scholarship as well as interest in and potential aptitude for training and experience in equine medicine and surgery. From June 15 to September 15, recipients work with and observe a number of practitioners who provide veterinary medical services in the breeding, training, and racing phases of

the state's horse industry. Each scholarship includes a $1,350 stipend to help defray travel and living expenses during the three-month tour.

Lake County Humane Society. One year's income from 100 shares of General Motors Corporation stock is awarded annually to a first- or second-year veterinary medical student selected on the basis of need and scholarship. Preference is given first to residents of Lake County, then to other residents of Illinois. The award was established October 18, 1966, in honor of Ida Himmelreich and Gertrude Glass.

Grants-in-Aid

WOMEN'S ORGANIZATIONS GRANTS—IN—AID

Each year a number of women students receive grants-in-aid from funds donated by A-Ti-Us; Women's Glee Club; Mortar Board; Shorter Board; Torch; Panhellenic Council; Blaisdell, Saunders, Taft, Wardall, and Evans Halls; Lincoln Avenue and Allen Residences; and Delta Delta Delta sorority. Application should be made to the Office of Dean of Student Personnel at times specified by the organizations listed. Awards are made only to students currently enrolled.

STUDENT ACTIVITY GRANTS—IN—AID

Certain fields of student activity have been approved for grants-in-aid. These fields are baseball, basketball, debate, dramatics, football, music, publications, student leadership, and track and cross-country. Application forms for other than athletic grants-in-aid may be obtained from the Director of the Undergraduate Scholarship Program. Application for athletic grants-in-aid should be made directly to the Director of Intercollegiate Athletics.

Undergraduate Tuition Waivers

Thirty-five tuition waivers are available each semester for assignment to new or continuing undergraduate students who are qualified and/or will qualify at the end of the semester or school year for regular scholarships or grants-in-aid. The waivers are awarded by the Director of Student Financial Aids to avoid injustice or inequity, or in hardship situations, to students who might be forced to remain out of the University if this assistance should not be provided. Such waivers are for one semester or one year, and no student is eligible for more than two semesters' waiver of tuition.

Loan Funds

Two general types of loans are administered by the University of Illinois. *Short-term loans* for small amounts are designed to cover emergency situations and to enable graduating seniors and graduate students to travel to prospective employers' offices for interview purposes.

Long-term loans are for major investment in education. In order to be considered eligible for long-term loans, involving University funds, applicants *must* have on file either a Parents' Confidential Financial Statement or the CSS-developed Student Confidential Financial Statement.

Loans involving University funds include:

1. University of Illinois Long-term (UILT)
2. National Defense Education Act (NDEA)
3. U. S. Public Health Service (USPH) Vet. Med.
4. United Student Aid Fund (USAF)

The loan funds listed below have been established for the benefit of worthy students in the University who need financial aid. Loans are not ordinarily made to students during their first year at the University. (Effective as of September, 1965, students in need of University loans must submit, in addition to the application, a Parents' Confidential Statement through the College Scholarship Service, as described under Scholarships on page 97.)

Each application must be approved by the dean or director of the college or school in which the student is registered, by the Dean of Students, and by the Business Office. Subject to availability of funds, a maximum of $2,500 may be loaned to a student covering the entire period that he is in attendance at the University. Arrangements may be made to repay loans over a four-year period in installments beginning four months after the student leaves school or otherwise ceases to be enrolled on a full-time basis. Security in the form of a qualified endorser or collateral satisfactory to the Business Office is required for all long-term loans unless otherwise provided in the deed of gift of the fund or waived in meritorious cases, as determined by the Dean of Students and the Business Office.

Application blanks may be obtained from, and, when completed, submitted to:

Student Loan Office
109 Lando Place
707 South Sixth Street
Champaign, Illinois 61820

Alpha Phi Omega. This fund was accepted February 5, 1962, and is administered under the general rules of the Board of Trustees governing loan funds.

American Society for Metals, Sangamon Valley Chapter. This fund was established June 17, 1964, and is administered under the general rules of the Board of Trustees governing loan funds for loans to metallurgy students only.

Elsie Anderson Memorial. Established in 1956, this fund is administered in accordance with general policies of the University with preference to students of Chinese origin who are graduate students in the School of Social Work.

Anonymous. Established August 6, 1963, by an anonymous donor and administered according to general University regulations.

Architects' Club of Chicago. This fund was established May 5, 1964, for interest free loans to fourth and fifth year architecture students.

Dora E. Biddle Loan Fund for Girls. This fund was derived in 1919–1920 from two gifts by Mrs. Dora E. Biddle of Macon, Illinois. Preference is given to those women students most advanced in their University work.

Bloomington-Normal. Established October 25, 1962, by the Bloomington-Normal Illini Club for loans to students who are (1) residents of Bloomington and Normal, (2) residents of McLean County, and (3) other students at the University.

Joseph Borus. Presented to the University April 22, 1968, for graduate students in the School of Social Work.

Campus Chest. Established June 6, 1963, by Campus Chest Student Organization. Loans are available to seniors only.

Norma E. Carr. Fund established March 9, 1966, by contributions from relatives of the late Miss Carr, chief clerk in the College of Communications. Loans are available to undergraduates enrolled in the College of Communications.

Carter-Pennell. Donated in 1923 by the late Joseph Carter and his wife, Jane Pennell Carter, this fund is used for loans to any sophomore student in the Colleges of Engineering or Agriculture, or to any student in the College of Liberal Arts and Sciences who is specializing in science.

Champaign Business and Professional Women's Club. Loans from this fund, presented to the University in 1940, are made to deserving women students.

Chicago Illinae Club. This fund was established by the Chicago Illinae Club especially for women students of the University.

Alice V. B. Clark. This fund is a bequest of Mrs. Alice V. B. Clark, widow of the late Dean Thomas Arkle Clark. It was received in 1951 and is used for loans to undergraduate students, preferably juniors and seniors. Loans can not exceed $300 in any one year and notes must bear interest at 5 per cent.

Class of 1907. Presented to the University in 1932, this fund is used to make loans to students under the general rules of the Board of Trustees governing loan funds, with no restrictions except that preference be shown to lineal descendants of members of the class.

Class of 1915. Established September 9, 1965, by alumni of the class of 1915. General University regulations apply in administering the fund.

Class of 1933. Established June 18, 1964, by a transfer of the class of 1933 scholarship fund, this fund is administered under the general rules of the Board of Trustees governing loan funds.

Class of 1938. Established April 16, 1964, by alumni of the class of 1938, this fund is administered by general University regulations.

Commerce. Established December 11, 1964, for loans to commerce students.

Consolidated. This fund results from the merger of the Automobile Show Fund, the Class of 1895 Loan Fund, the Graduate Club Loan Fund, the Detroit Illinae Loan Fund, the Kappa Delta Pi Loan Fund, and the Student Friendship Fund.

John S. Crandell. Established December 27, 1965, by William P. Jones, Jr. in honor of the late Professor John S. Crandell of the College of Engineering. Loans are made to graduates and undergraduates studying civil engineering.

Grace Darling Memorial. This fund, founded by Mrs. R. V. Cram, of Minneapolis, in 1922, is operated under the regulations of the Edward Snyder Fund described on pages 119 and 120.

Louis Edward Dawson Memorial. A gift from Mrs. Edward Dawson, accepted in 1945 as a memorial to her son, Louis Edward Dawson, this fund is used to aid worthy students in chemistry.

C. C. DeLong. Established June 9, 1967, this is a long-term loan fund administered under general University regulations for assisting students in completing their education.

Denison Memorial. The late Charles A. Denison, of Argenta, bequeathed this fund to be used for loans to worthy senior students on recommendation of the President and Treasurer of the University.

Detroit Illini. This fund was established May 5, 1965, by Detroit Illini. Loans are made according to general University regulations.

Harry J. Diffenbaugh. The late Harry J. Diffenbaugh, of the Class of 1882, established a trust fund, the income of which is used for loans to worthy and needy students who are residents of the state of Missouri and attend the University of Illinois. Applications for loans may be made to the Dean of Students of the University of Illinois or to the First National Bank of Kansas City, Missouri, the administrators of the trust fund.

Dow Chemical. This fund, originally given to the University as a scholarship fund, was changed to a loan fund in 1967. It is administered under general University policy.

DuPage County Health Improvement Association. A gift from the DuPage County Health Improvement Association, received in 1961, for loans to students majoring in health education.

Electrical Engineering. Established by the Electrical Engineering Society and maintained by the Student Branch of the American Institute of Electrical Engineers, this fund includes income from electrical shows and is available for juniors and seniors in good standing in the curricula in electrical engineering and engineering physics.

Engineering Student. The residual assets of the Real Co-operative Company (formerly the Engineering Co-operative Society) were accepted by the University in 1936 for the purpose of establishing a loan fund for the benefit of students in the College of Engineering.

Gertrude Escher. The income from this endowment is used for student loans. Each borrower is limited to $500 a year.

Gilbert C. Finlay Memorial. Established May 23, 1967, in the memory of Mr. Finlay who was on the staff of the College of Education. This fund is administered under the general rules of the Board of Trustees governing loan funds.

Olaf S. Fjelde Memorial. This fund was established May 14, 1964, by family, friends, and fellow faculty members of the late Mr. Fjelde. Loans are available to architecture students, with preference given to members of Alpha Chi Rho.

James Wilford Garner Memorial. Presented to the University in 1941, this fund is used for loans to worthy students in political science.

Benjamin Chase Grout Memorial. Established September 18, 1963, by George Vrana in memory of Benjamin Chase Grout. Preference is shown to premedical students in the granting of loans from this fund.

Samuel and Lydia Hare. The late Samuel Hare, of Piper City, bequeathed this fund (accepted by the Board of Trustees in 1937) for loans to students who, by previous study, have demonstrated their worthiness. Loans may not exceed $500 to any one borrower.

Le Sueur H. Hendrick Memorial. Accepted February 27, 1962, this fund was established by the Capital Chapter of the Illinois Society of Professional Engineers to be made available to deserving juniors or seniors in any branch of engineering.

Mary Trowbridge Honey. The board of Trustees accepted a bequest of the late Mary Trowbridge Honey, of Wayne, Nebraska, in 1942, for loans to students in the Department of Classics.

Robert R Hudelson. This donation, accepted in 1957, was established in recognition of Dr. Hudelson's services in agriculture. Preference is given to indigent students in agriculture.

Illini Club of the Philippines. Fund established October 25, 1966, by the Illini Club of the Philippines for loans to Filipino students at the University.

Ina Meredith Hunter. The late Ina Meredith Hunter bequeathed this fund, in 1961, for loans to deserving junior and senior students who won honors in scholarship during their sophomore year.

Illinois Congress of Parents and Teachers. Established in 1960 for assisting worthy future teachers.

Margaret Lange James. Established by a gift from President E. J. James in 1914, this fund was increased by the University Senate as a memorial to him. Loans are made to students, preferably women, who have been in residence at least one year, have attained junior standing, and expect to graduate.

Edward J. Jones and Martha E. Jones. The Board of Trustees accepted a bequest of the late Edward J. Jones, of Secor, Illinois, in April, 1969. This fund is administered under the general rules of the Board of Trustees governing loan funds.

A. F. Kaeser. A gift from Dr. A. F. Kaeser, of Highland, Illinois, was accepted by the Board of Trustees in 1939. Graduates of high schools located in Highland, Illinois, are given preferential consideration for loans from this fund. If this fund is not exhausted through loans made to these graduates, loans may be made to graduates of high schools located in the counties of Madison, Bond, and Clinton. Loans made to any one student may not exceed $200 annually or $800 for the four-year period.

W. G. Kammlade. Established in 1961, this fund originated by contributions from

friends of the Cooperative Extension Service in Agriculture and Home Economics throughout the state in the name of Dr. W. G. Kammlade, retired Associate Director of the Extension Service. Prospective borrowers must have an interest in cooperative extension work as a career to be eligible for consideration. The maximum amount to be loaned to each student is $700.

Willis Prentice Kimble. A memorial fund established by Mrs. Kimble in 1929. Loans may be made to sophomores, juniors, and seniors, but not in excess of $100 to any one individual.

Koppers Company, Incorporated. Established in 1961 by the Koppers Company, Incorporated, this fund is for loans to students in architecture.

Franklin C. Kreider. Fund established by Collinsville High School Band Parents Association, April 28, 1966. Loans are to be made to Collinsville High School graduates majoring in instrumental band music.

Marcia Lome Kritchevsky. This fund was established in 1960 in memory of Mrs. Kritchevsky and is to aid students in teacher training.

Law School. Established March 20, 1963, by contribution from Law School alumni. Loans made from this fund must be approved by the Committee on Scholarships and Admissions of the College of Law. No cosigner or period of residency is required.

League of Choreographers and Composers. This fund, originally given to the University as a scholarship fund, was changed to a loan fund in 1957. Loans are made to students in dance or the related arts.

William E. Levis. This fund was established in 1936 by a gift from William E. Levis of the Class of 1913, President of the Owens-Illinois Glass Company. Loans are made (1) to employees or children of employees of the Owens-Illinois Glass Company and its affiliated companies or subsidiaries, who are students in attendance or prospective students expecting to register immediately at the University; and (2) if funds are available, to students who have been in attendance at the University for at least one year, under the general regulations governing loan funds.

Loan Various Donors—Staff Loan Fund. Presented to the Board of Trustees in May, 1969, to provide financial assistance to new faculty members from foreign countries.

Annie Lourie. Established January 2, 1968, to be used by undergraduate students. It is being administered according to general University regulations.

India Mathis Memorial. This loan fund was established June 8, 1967, by the employees of the Student Employment Office in memory of Miss India Mathis who was employed in that office. The fund is to assist working undergraduate students.

David T. May. This fund was established in memory of Mr. May who was a member of the Class of 1905. It is available to deserving students.

William B. McKinley. This fund is made up of several donations made between 1912 and 1926 by the late Senator William B. McKinley. Loans may be made to male students who have been in residence at least one year and intend to graduate.

Milwaukee Illini Club. Established October 18, 1962, by the Milwaukee Illini Club for long-term loans to deserving students from Wisconsin.

J. S. Morris. Donated by the late Joseph R. Morris, of Anne Arundel County, Maryland, in 1922, this fund provides loans to students who have been in residence at least one semester. Loans may not exceed $400. Preference is given to advanced students.

National Association of Federal Veterinarians. Established May 13, 1964, this fund is for loans to students in the College of Veterinary Medicine.

Jesse Smith Noyes Foundation. Received as a gift from the Noyes Foundation in 1960, this fund is administered under the general rules of the Board of Trustees governing loan funds.

Overseas Soldiers. Originally donated in 1919, with an addition in 1924, this fund

is available to soldiers, sailors, and marines with overseas service, and to their descendants. Qualifying students in the junior, senior, or postgraduate years, or students in any year in the College of Agriculture, are eligible. Loans may not exceed $200.

Panhellenic. This fund was established April 4, 1964, by Panhellenic Council. Sorority women who have completed one semester at the University are eligible for loans from this fund.

C. W. Parmelee. Friends of Professor Cullen W. Parmelee presented this fund in 1948 for loans to students in ceramic engineering.

John J. Parry. Accepted in 1956, this fund is available only to graduate students majoring in English. The loans are noninterest bearing.

Robert Peine. This fund became available May 14, 1968, to students in the College of Agriculture who are majoring in agronomy.

Phi Beta Kappa. This fund was received as a gift in 1961 from the Gamma of Illinois Chapter of Phi Beta Kappa. The fund is available to promising students enrolled in curricula through which election to membership in Phi Beta Kappa is possible. Students must be enrolled on the Urbana campus.

Marion K. Piper. This loan fund, accepted in 1968, is used only for students in home economics.

Joseph A. Polson and Betsy C. Polson. Established August 6, 1963, by a bequest of Mr. and Mrs. Polson. Loans are made in accordance with general University regulations.

Raymond E. Rickbeil. Established August 6, 1963, by Raymond E. Rickbeil. Fund is administered according to general University regulations except that borrowers must have maintained an overall scholastic average of 4.0 under the present grading system or its equivalent.

Lawrence W. Rogers. A donation made in 1960 to establish a fund to assist students in architecture.

William T. Rogers. A bequest of William T. Rogers established this fund in 1948 for loans to deserving students in need of financial assistance.

Marcus Russell. Donated by the late Marcus Russell, of Los Angeles, California, in 1926, the proceeds from this fund are used for loans to worthy and indigent students.

St. Clair County Heart Association. Established December 15, 1964, by Midwest Rubber Reclaiming Company. The fund is established within the framework of the Burnsides Research Laboratory with recipients of loans to be designated by Dr. F. A. Kummerow, or his successor, as head of the Laboratory.

St. Louis Illinae Club. This scholarship loan fund was established in 1937.

St. Louis Illini. Established September 14, 1963, by Illini from the St. Louis area. Loans are made to students from that area.

Sandemac Kennel Club Veterinary. Established February 25, 1966, by the Sandemac Kennel Club, Inc., of Decatur, Illinois, for loans to students in the College of Veterinary Medicine.

William Wesley Sayers. This fund was bequeathed by Mr. Sayers for loans to undergraduates studying engineering and engineering science and research.

Gretchen and Paul Schilling. Established in 1958, this is a long-term loan fund used under general University regulations.

Sears Roebuck Foundation. Donated in August of 1968 for College of Agriculture students only.

Sigma Delta Epsilon. Established March 22, 1966, by Gamma Chapter of Sigma Delta Epsilon. Loans are available to senior or graduate women in science.

Edward Snyder. This fund was established in 1899 by the late Edward Snyder,

Professor of German in the University. Loans may be made to students of junior standing who are in residence and who expect to graduate. Preference is given to those of high rank and advanced standing, but no distinction is made as to sex or course of study.

Springfield Illini Club. Established September 14, 1963, by Springfield, Illinois Illini. Loans are available only to students from that area.

David B. Steinman. This loan fund, accepted in 1958, is used only for students in civil engineering.

Henry Strong Educational Foundation. The Henry Strong Educational Foundation, established at Chicago under the will of General Henry Strong, provides for loans to students under twenty-five years of age, preferably in the upper classes.

John R. Stubbins. Established November 14, 1966, by the John Russell Stubbins Foundation. The fund may be loaned only to students who are bona fide residents or citizens of Venezuela and are candidates for the B.S. or master's degree in the College of Engineering. Each borrower is limited to $3,000 for each academic year.

Student Organizations. Established December 20, 1961, by a transfer to the University of surplus funds of the Student Organizations Fund. The fund is administered by the University. It is to be returned to the Student Organizations Fund when required.

Student Senate. This fund, accepted in 1958, is available to undergraduate students.

Harry Roberts Temple. This fund was established in 1924 by Mrs. Frieda Block Temple. The regulations of the Edward Snyder Fund apply except that preference is given to students in the Department of Architecture. Applicants must have junior standing.

Tile Council of America. Established in 1959, this fund was created for students in architecture.

University of Illinois Foundation. This fund, established in 1956, is for long-term loans.

University of Illinois Women's Club. Established March 14, 1967, by the University of Illinois Women's Club. The fund may be loaned to undergraduate women on the basis of need; otherwise it is governed by the general University regulations.

Harley J. Van Cleave Memorial. Established in 1955, this fund is available to worthy doctoral candidates in zoology.

Various Donors. Established February 5, 1964, to start a fund for loans to veterinary medicine students.

P. L. Windsor. Established March 28, 1966, in memory of Dr. P. L. Windsor. Loans are available to students in the Graduate School of Library Science.

Sally Wolin Memorial. Established February 3, 1965, by the Sally Wolin Memorial Council for loans to students in the Jane Addams Graduate School of Social Work.

Women's Athletic Association. Established in 1932, this fund is available to women students during the senior year.

Women's League. Established by the Women's League in 1911, this fund is administered under the regulations of the Edward Snyder Fund.

Zoology Department. This fund was contributed by the staff and graduate students in the Department of Zoology during 1961 to honor Majid Al-Radhawy, a graduate student in zoology.

SHORT—TERM LOAN FUNDS

Short-term loan funds are available in small amounts for short periods only. In the Urbana departments, the approval of the Dean of Students and the Business Office is required. In the Chicago Circle departments, the approval of the Dean of Students is required.

Cora C. Bright Memorial. A gift from the Illinois Congress of Parents and Teachers in 1939, this fund provides short-term loans to students at Urbana.

Class of 1932. This fund was presented to the University in 1934, through the Alumni Association, for short-term loans to students at Urbana.

Gerald S. Cohen. This fund, established in memory of the late Gerald S. Cohen, was received in 1957. It is available to all students.

College of Veterinary Medicine. Established September 21, 1962, by donations from the Champaign Kennel Club and the Women's Auxiliary of Illinois Veterinary Medical Association.

Decatur Obedience Training Club, Inc. Fund established June 2, 1966, for short-term loans to students in the College of Veterinary Medicine.

Verne Hall Detweiler. This fund, a gift from the Illinois Congress of Parents and Teachers in 1936, is for short-term loans to students at Urbana.

Dr. and Mrs. Arthur L. Ennis. This fund was established in 1956 for short-term loans.

Fraternity Alumni. Established January 30, 1962, by contributions of fraternity alumni for emergency use by the Dean of Students.

Edward C. Heidrich, Jr. Established in 1944 by a gift from Edward C. Heidrich, Jr., this fund is for short-term loans to students at Urbana.

Fred Dilling Kirkpatrick Memorial. This fund was established February 3, 1965, by Sidney Kirkpatrick in memory of his father, Fred Dilling Kirkpatrick.

Lincoln State Cat Club, Inc. Established June 15, 1966, for short-term loans to students in the College of Veterinary Medicine.

Men's Student Aid. Established in 1960 with disbursement of loans solely under the direction of the Office of Student Financial Aids.

Thomas L. Seanor Memorial. This fund was presented in 1945 by Lieutenant Harry F. Seanor as a memorial to his brother, Lieutenant Thomas L. Seanor.

Irene Symonds. A gift from the Illinois Congress of Parents and Teachers, this fund was accepted in 1943, as a memorial to Irene Symonds. The fund is for short-term loans to students at Urbana.

Tau Delta Tau. This fund was presented in 1945 by Tau Delta Tau fraternity as a memorial to two of its members, John Donald Danielson and Joel Hubbard Rossiter.

University Faculty Short-Term Loan Fund. Established in 1932–1933, this fund represents a portion of the money set aside for short-term loans to students at Urbana from funds solicited in 1931 by the University Senate Committee on Unemployment and Relief.

University of Illinois Women's Club. This fund was established October 27, 1964, for short-term loans.

INTERMEDIATE LOAN FUNDS

Intermediate loans in amounts not to exceed $500 may be made to help meet special financial needs of students who can demonstrate evidence of interrupted cash flow during an academic year and who can also demonstrate evidence of means of complete repayment during the academic year. Monthly billing service for payments due will be provided by the Business Office. A service charge of one per cent of the loan, or not less than $5.00, will be assessed. Loans are interest free. Borrowers will be accepted for consideration upon recommendation by the Student Personnel Office. Final eligibility will be determined by the Office of Student Financial Aids.

FEDERAL LOAN FUNDS

NATIONAL DEFENSE EDUCATION ACT

Provision has been made in the National Defense Education Act of 1958 (Title II of Public Law 85–864) to make available substantial funds for loans to students. Loan applications are processed by the same University officials who handle other University loans.

Applicants must be United States nationals. This includes citizens and all persons who are in the United States on a permanent resident status. Borrowers are required to sign a loyalty oath to the United States of America. All applicants must present superior records, and need for financial assistance must be shown.

Loans to undergraduate students are limited to $1,000 each year (July 1 to June 30). Graduate or professional students may borrow to a maximum of $2,500 each year but the total of loans to such students, including loans as an undergraduate, may not exceed $10,000. The signature of the borrower on a promissory note is required. These federal loans carry 3 per cent interest beginning nine months after ceasing to be a full-time student, either by graduation or withdrawal. A postponement of payments on the note, not in excess of three years, may be arranged during the time the borrower is serving in the Armed Forces of the United States, is a volunteer under the Peace Corps Act, or is a VISTA volunteer. Interest is not charged during this period. Up to 50 per cent of a National Defense Education Act loan will be cancelled if the borrower serves as a full-time teacher in a public or non-profit private school in the United States. This applies to elementary or secondary schools and institutions of higher education. Such cancellation will be at the rate of 10 per cent of the loan, for each academic year, or its equivalent, of such service. Also, if teaching service is performed in an elementary or secondary school officially classified as having a high percentage of students from low income families, cancellation will be at the rate of 15 per cent per year with no limit on total cancellations.

Cancellation benefits have been added for military service performed after June 30, 1970. Cancellation will be at the rate of 12½ per cent of the total amount of such loans, plus interest for each year of consecutive military service up to a maximum of 50 per cent of the total loan.

HEALTH PROFESSIONS STUDENT LOAN PROGRAM FOR VETERINARY MEDICINE STUDENTS

Provision has been made in the Health Professions Act of 1963 (Public Law 88–129) to make available substantial funds for loans to Veterinary Medicine students. Loan applications are processed by the same University officials who handle other University loans. Applicants must be United States nationals. This includes citizens and all persons who are in the United States on a permanent resident status. All applicants must show a need for financial assistance.

Loans to students are limited to a maximum of $2,500 per year. The signature of the borrower on a promissory note is also required. These federal loans bear interest on the unpaid balance at the rate of 3 per cent per year or the federal rate of interest at the time the loan is made, whichever is the greatest, beginning 36 months after the borrower ceases to be a full-time student, either by graduation or withdrawal. Loans are repayable over a period of 10 years, the first payment being due 48 months after graduation or withdrawal. A postponement of payments on the note, not in excess of three years, may be arranged during the time the borrower is serving on active duty in a uniformed service or as a volunteer under the Peace Corps Act. No interest is charged during this period.

ILLINOIS GUARANTEED LOAN PROGRAM

The Illinois General Assembly has authorized an Illinois loan program to guarantee student loans made by commercial lenders to legal residents of the state of Illinois, with the intention that no qualified student will be denied an opportunity to pursue a program of higher education because of financial reasons. Non-Illinois residents must seek assistance through their home state program.

There is no age restriction; a minor is eligible to enter into a loan contract and assume the responsibility for his own indebtedness. It is planned that a student will borrow only once during the academic year. Repayment does not begin until the student either graduates or ceases full-time study. An eligible student may borrow from a minimum of $300 to the maximum amounts stated below.

MAXIMUM LOAN AMOUNTS

Freshman year	$1,000
Sophomore year	$1,500
Junior year	$1,500
Senior year	$1,500
First year graduate or professional	$1,500
Second year graduate or professional, etc.	$1,500

No loan will be granted in an amount which exceeds the established educational expenses at the eligible college selected by the student, minus any other scholarship or loan assistance.

UNITED STUDENT AID FUNDS, INCORPORATED

The University of Illinois participates in the United Student Aid Funds, Incorporated, program. USA Funds is a private, non-profit service corporation which endorses low-cost, long-term loans made by local banks to needy college students.

USA Funds serves as an intermediary between the student's hometown bank which makes the loan and the student's college which recommends and underwrites loans by depositing funds in the USA Funds reserve. These loans are made to deserving students regardless of their curriculum, but prospective borrowers must have completed their freshman year.

The maximum loan to an undergraduate is $1,000 per year, and $1,500 to a graduate student, or a combined total of $7,500. The amount of loan will be determined on an individual basis. Repayments begin the first day of the fifth month after completion of the student's education. The normal repayment period is thirty-six months, but larger loans may be repaid over periods ranging up to fifty-four months. Monthly installments may not be less than $30. Loans made from USA Funds bear no more than 6 per cent simple interest. Loans will be cancelled in the event of death of the borrower.

Special funds from a bequest by Dr. Fred H. Burt have been deposited with USA Funds for loans to be made to students in Veterinary Medicine.

A deposit in USA Funds has been made from The Law School Fund by the Law Alumni Advisory Council for loans to students in the College of Law.

Persons desiring more information about United Student Aid Funds, Incorporated, should inquire at the Office of Student Financial Aids.

Student Employment

Jobs both on and off campus are considered as a part of the total financial aid resource available to qualified students. Employment is awarded first to students who have a demonstrated need for such financial assistance. Only after this group has been referred to employers can other students be recommended for jobs. Information and assistance is available from the Student Employment Office, a part of the Financial Aids Office.

Rates vary from $1.60 to $3.95 an hour, depending on the type of work and the responsibility involved. Board jobs usually require two and one-half to three hours of work a day; board-and-room jobs, four hours. Other types of jobs require from ten to twenty hours of work per week.

The University recommends that each new student have a cash reserve or source of funds for the school year of at least $610 ($1150 for out-of-state residents). Prospective and continuing students having special financial need may request information regarding the College Work-Study Program.

The Student Employment Office welcomes the opportunity to assist those who must have work in arranging the type of work which will least interfere with normal academic performance.

Health Service

McKinley Health Center care is available to all currently enrolled students of the Urbana-Champaign campus of the University who hold a valid University identification card. There are four basic types of care available at the McKinley Health Center: (1) routine office care (outpatient section), (2) care requiring hospitalization (inpatient section), (3) care for injuries or acute illnesses (emergency room), and (4) mental health care (outpatient clinic and inpatient hospitalization).

Health Service physicians take the place of a student's family doctor while he is away from home. They are experienced clinicians, most of them having practiced for years as family physicians. Students may consult the Health Service physician of their choice in his office by appointment. Care is similar to that offered by a private, general physician. A wide range of diagnostic tests is available to the Health Service physician, including laboratory procedures, x-ray examinations, and electrocardiograms.

The inpatient section of McKinley Health Center (McKinley Hospital) is a fifty-eight-bed medical hospital owned by the University and operated by the Health Service. It is fully accredited by the Joint Commission on Accreditation of Hospitals. The medical staff includes both community and Health Service physicians.

A Health Service physician is available twenty-four hours a day for students or employees injured on-the-job who require emergency care.

Consultative and inspection services in areas such as water supply, waste disposal, food sanitation, swimming pools, and air pollution are provided by the Environmental Health Division.

A pre-entrance physical status report must be provided by all new students. Completion of this report is at the student's expense and must be on the form furnished by the University. Tuberculosis screening by the Health Service is required of all new, readmitted and transfer students at the time of their registration. Failure to meet this requirement will result in cancellation of registration. Specific details are found under the "General Requirements for Admission" on page 33.

Hospital-Medical-Surgical Insurance

All undergraduate and graduate students enrolled in credit courses and in attendance at the University are assessed a fee at registration for McKinley Hospital care and a Medical Insurance Plan.

McKinley Hospital. Hospital services are without additional charge other than for personal convenience items. Dependents are not eligible for care at McKinley Hospital unless they are also enrolled students at the Urbana-Champaign campus.

Medical Insurance Plan. Provides hospital-medical-surgical insurance as defined in the insurance certificate. The student has a free choice of any legally qualified hospital or licensed physicians. Eligible dependents of insured students (spouse and unmarried dependent children under nineteen years of age) may be insured under the insurance plan by making application at the Insurance Office and paying the additional premium for dependents' coverage within the first ten days of instruction of each semester.

Students enrolled in the second semester may elect to take the insurance for the entire summer vacation period by making application and paying a regular semester premium to the Insurance Office between May 15 and through the fifth instructional day of the summer session. The insured student's eligible dependents may also be included for this coverage.

Application for any of the periods designated above may be made at the Armory during the regular registration period, as well as in the Insurance Office.

Housing

Housing for students at the University of Illinois is provided in University residence halls, fraternities, sororities, private residence halls and homes, and cooperative houses. The Board of Trustees of the University has authorized the establishment of housing standards to make certain that living accommodations for single undergraduate men and women are such as to serve the best interests of the students. These standards apply equally to the University-owned and privately-owned housing which is available to students. Present regulations require that all single undergraduate men and women students live for the entire academic year in housing which meets these standards and is approved by the University, unless the student reaches the age of twenty-one before September 1, 1971. Students enrolled in the College of Law or College of Veterinary Medicine are exempted from this requirement, as are all other students who will be twenty-one years of age before September 1, 1971.

Housing which is approved includes University residence halls, fraternities and sororities, and privately-owned housing which meets University standards.

General information about all types of housing is given in greater detail in a separate brochure, "Student Housing at the University of Illinois." This brochure is mailed to each undergraduate student at the time the Office of Admissions notifies the student of his eligibility to enter the University. If additional housing information is needed, the student can write to Housing Information, 420 Student Services, 610 East John Street, Champaign, Illinois 61820. Students and parents are invited and encouraged to call at the offices of the Housing Division whenever they are on campus if they would like to discuss prospective housing arrangements with a housing consultant. Office hours are maintained from 8:00 a.m. until 5:00 p.m. Monday through Friday, and 9:00 a.m. until 12:00 noon on Saturday, except during general campus holiday periods. Special hours are maintained during the weekend prior to registration.

All rental and board rates quoted herein are current prices and are subject to increase.

UNIVERSITY POLICY ON NONDISCRIMINATION IN HOUSING

The University of Illinois is committed to a policy of nondiscrimination in housing with respect to race, religion, and national origin. University-owned housing facilities are operated on this basis. Privately-owned housing which is University approved or listed must also be operated in compliance with this policy. Intent to comply with this policy is evidenced by the filing of a pledge with the University Housing Division not to discriminate on the grounds of race, religion, or national origin. A Housing Review Committee has been appointed by the Chancellor to assist in the implementation and enforcement of this policy.

If anyone has reason to believe that an owner or manager of certified housing or any other listed housing has refused or failed to rent to an individual because of the individual's race, religion, or national origin, this information should be communicated directly to the secretary of the Housing Review Committee or to any other member of the committee. The secretary can be reached at 333–0613. The individual who alleges discrimination need not be University-affiliated; furthermore, the particular rental unit involved in the alleged discrimination need not be one that is itself listed with the University provided the owner or manager has a nondiscriminatory pledge on file.

University Residence Halls

In both physical facilities and counseling program, University-owned residence halls for men and women students are planned to provide each student with the best possible living and learning conditions. High scholarship standards are encouraged. Student government experiences, intellectual and cultural programs, social programs, recreational facilities, and association with mature and trained residence staff members provide opportunity for sound academic and social development. Approximately 4,800 men and 4,500

women are living in University residence halls. Any single undergraduate student otherwise qualified to enter the University may apply for residence hall accommodations. Room assignments are made without regard to a student's race, religion, or national origin.

Prospective new students or transfer students should also consider the merits of approved privately-owned housing in planning living arrangements.

Housing for Men

Housing available for single undergraduate men includes the University residence halls, the fraternities, and the 91 "facilities approved" student homes and private residence halls. It is suggested that the student wait until his application for admission has been accepted by the University before he begins to arrange for any type of housing.

RESIDENCE HALLS

University residence halls for men are located at points convenient to most parts of the main campus. Individual halls accommodate from 250 to 650 occupants, largely in rooms for two persons, although there are some triple rooms. All of the halls offer a room-and-board plan, with twenty meals served each week. Rates per person for room and board for one semester (approximately sixteen weeks) are $517.50 for double accommodations and $492.50 for triple accommodations, plus $20.00 per person in air-conditioned residence halls. These are current rates and may be subject to change due to modification of board plans or services offered.

A University residence hall application is automatically sent to all students after acceptance for admission to the University and payment of the required advance admission deposit. A student who receives an application and is interested in residence hall facilities should complete and return the application as soon as possible.

FRATERNITIES

There are fifty-six national fraternity chapters at the University, with a total membership of approximately 3,400 men. Membership in fraternities is by invitation, and these invitations are offered at the end of "rush weekend." The fraternity rush period for high school seniors occurs April 23 through 25, beginning Friday evening and extending through Sunday afternoon. During rush, prospective members may visit various fraternity chapters to which they have been previously invited. Information on fraternities and registration forms for the formal rush weekend are sent to each eligible man immediately after his permit to enter the University is received. Housing is available for a student who participates in the complete formal rush program and does not pledge —provided he has submitted a residence hall application and noted on it his participation in fraternity rush. After this spring rush weekend, scholastically eligible men may participate in informal rushing and pledging throughout the summer and the school year and by registering at the Interfraternity Council office, 266 Illini Union. There is also a mid-year rush period during the first two weeks of the second semester. Fraternity rushees must be admitted to the University.

Living costs in fraternities are competitive with living costs in other accommodations. In addition, fraternity chapters charge an initiation fee, and some charge pledge and building fees. Additional information on fraternities can be obtained by writing the Interfraternity Council, 266 Illini Union, Urbana, Illinois 61801.

PRIVATELY—OWNED MEN'S HOUSING

Private "facilities approved" homes ranging in capacity from five to fifty students accommodate about 800 students. These facilities vary in size, location, and services. Room and board are available in some, others furnish room only. Contracts are negotiated both on a one-semester and an academic-year basis. Many have student organizations

and participate in University activities. In most instances it is necessary, and the University recommends, that the student visit the campus and arrange for the accommodations by personal interview. Homes furnishing room and board have rates ranging from $500 to $600 a semester. Room-only facilities range from $45 to $65 per month.

Private "facilities approved" residence halls are also available. These units range in capacity from fifty to 700 students. Two of the newest residence halls provide coeducational housing, similar to several of the University residence halls. Most offer room and board. Supervised apartment-type suites are also available in this housing category. Costs for one academic year range from $1,000 to $1,650. Students are invited to visit the campus to inspect these facilities. However, arrangements can be made by mail with most of these halls. A list of the halls can be obtained by writing to the Housing Information Office.

Housing for Women

Single undergraduate women have a choice of several types of approved housing accommodations. The University-operated residence halls and a limited number of cooperatives, twenty-four sororities, and privately-owned student homes and residence halls, as well as four privately-sponsored cooperative homes—all offer a variety of living quarters. Approved facilities are inspected by the University. It is important to note that housing arrangements should not be finalized until application for admission has been filed and a permit to enter the University has been granted by the Office of Admissions.

RESIDENCE HALLS AND COOPERATIVES

University residence halls for women are located at all points convenient to the main campus. The cost of room and board is determined by the number of students living in each room. In single rooms the cost is $497.50 to $527.50, double rooms $467.50 to $497.50, and triple rooms $472.50 to $497.50 a semester per occupant (approximately sixteen weeks) plus $20.00 per person in air-conditioned residence halls. These rates are current prices, subject to increase. Most of the rooms accommodate two persons.

A University residence hall application is sent automatically to the prospective student after she is declared eligible to enter the University and has paid the required advance admission deposit. If interested in University residence hall facilities, she should complete and return the application promptly.

Applications for accommodations in the University cooperative work-plan houses must be obtained from and returned to the Coordinator of Women's Housing, 420 Student Services Building. Residents are responsible for most of the household duties in their units, where each works approximately seven hours a week. The cost of room and board is $300.00 a semester. Those cooperatives offering room only, with kitchen privileges, have a $200.00 semester rate.

SORORITIES

Membership in sororities is by invitation. Invitations are issued following formal and/or informal rushing parties. Upperclassmen pledged by sororities move to the chapter house of their choice at the beginning of the next semester. Freshmen pledged to sororities move to the chapter house of their choice at the beginning of their sophomore year.

To be eligible to pledge a sorority, a student must be enrolled in the University of Illinois for at least twelve credit hours, must have completed a minimum of twelve hours at any college or university, and must have attained a 3.0 grade average ("C" = 3.0) for all previous college work. The major, formal rush occurs in the winter between semesters, with informal rushing periods in the spring and fall. The dates for the 1971–1972 rushing periods and a description of the kind of rush may be obtained by writing the Office of Student Programs and Services, 110 Student Services Building, 610 East John Street, Champaign, Illinois 61820.

PRIVATELY—OWNED WOMEN'S HOUSES

Individual privately-owned organized houses accommodate from nine to sixty-three students. Some offer both room and board, others provide room only, or room with kitchen privileges, and still others have a cooperative work plan. A visit to the campus is recommended to determine which of these arrangements meets the student's needs. Lists indicating the vacancies in each type of accommodation should be obtained from the Housing Information Office, 420 Student Services Building, 610 East John Street, Champaign, Illinois 61820. A student coming for the purpose of inspecting the various facilities should first consult the staff at the Housing Information Office concerning space available for a specific semester as well as to ask advice regarding the different types of facilities and their suitability in terms of cost, location, etc.

Rates in these units vary from approximately $500 to $550 a semester for board and room. The range for room with kitchen privileges is $50 to $80 a month. Cooperative house plans require approximately seven hours of work a week, and costs are from $320 to $360 for room and board for one semester.

Privately-owned residence halls are also available. These facilities vary in capacity, type of accommodation, services, and rates. The choice ranges from a large, coeducational room-and-board residence hall to a small, supervised, suite-living arrangement. Rates range from approximately $1,100 to $1,650 for an academic year. Those wishing to make arrangements by mail can obtain a list of these private residence halls from the Housing Information Office.

Housing for Married Students

Undergraduate students who are married must, for the most part, rely on the local community to meet their housing needs. A limited number of University-owned apartments are available to undergraduate married students under a priority system. An application-brochure can be obtained by writing to the Housing Information Office, 420 Student Services Building, 610 East John Street, Champaign, Illinois 61820, or to the Orchard Apartments Office, 1842-A Orchard Place, Urbana, Illinois 61801.

The Housing Information Office maintains a list of privately-owned apartments and houses to assist married students and staff. This list contains information regarding rental rates, whether the apartment is furnished or unfurnished, approximate distance from the campus area, etc. The list is available during the regular office hours outlined on page 125, as well as during the special office hours maintained during the weekend prior to registration. Housing consultants are available during these same hours for consultation regarding specific apartment listings as well as other related matters.

Generally speaking, May 1 to July 15 and December 1 to January 15 are considered the most desirable times to visit the campus for purposes of arranging for living accommodations for the first and second semesters, respectively. The student is invited to visit the office at any time, however, to discuss housing arrangements as well as examine the current listings.

Rates vary greatly depending on such factors as size, quality, location, recency of construction, degree of privacy, services included, etc. The following broad price ranges reflect housing costs in Champaign-Urbana.

Furnished and Unfurnished Apartments

One- and two-room units	$ 75–130 per month
Three-room units (one bedroom)	$100–200 per month
Four rooms and larger (two and three bedrooms)	$130–250 per month

Libraries

The University Library's resources for study and research are outstanding. Its present collections exceed 4,400,000 volumes in Urbana.

In addition to the figures for catalogued volumes cited above, the University Library at Urbana-Champaign contains approximately 553,000 pamphlets, 381,000 maps and aerial photographs, 333,000 music scores and parts, and 389,000 microtexts. More than 26,000 periodicals and newspapers are received currently.

Outstanding collections have been developed for a variety of fields. In the humanities, strong areas include classical literature, history, and archaeology; sixteenth-, seventeenth- and eighteenth-century English literature, especially the Milton-Shakespeare period; Victorian literature; French, Italian, and Spanish literature; German literature of the sixteenth and seventeenth centuries; and comparative philology. In the fine arts, architecture, landscape architecture, and music are noteworthy.

In the social sciences, the Library's holdings are significant for western United States history, Lincolniana, Latin-American history of the Revolutionary period, Italian history, medieval and modern European history, German history for 1830–1900, Irish history, international law and relations, political science, law, economics, labor and industrial relations, and education.

For science and technology, collections of high rank are held in mathematics, chemistry, biological sciences (especially parasitology, entomology, and ornithology), physics, geology, engineering, and agriculture.

The Library's bibliographical facilities comprise a union catalog of more than 7,000,000 cards, representing titles owned by all libraries on the Urbana campus; printed catalogs of libraries, such as the Bibliothèque Nationale, British Museum, and Library of Congress; national and trade bibliographies of all countries for which such works have been issued; bibliographies of special subjects; and similar aids.

A number of departmental and divisional libraries are maintained. Following are the principal separately administered collections in the general library building: Classics; Commerce; Education and Social Science (includes the Human Relations Area Files); English; History and Philosophy; Library Science; Map and Geography; Modern Language; Newspaper; Physical Education; and the University Archives.

The Undergraduate Library is in a separate building adjacent to the general library building. It contains over 80,000 volumes, numerous periodicals, and other materials especially selected to serve the general needs of undergraduate students.

Elsewhere on the campus are departmental libraries for the following fields: Agriculture, Architecture and Fine Arts, Biology, Chemistry, City Planning and Landscape Architecture, Communications, Engineering, Geology, Home Economics, Labor and Industrial Relations, Law, Mathematics, Music, Physics, and Veterinary Medicine.

Placement Service

The opportunity to apply individual talents and training in an appropriate profession or vocation is the normal post-graduation goal of college students. The University Coordinating Placement Service is responsible for helping degree candidates arrange appropriate employment upon graduation. The service extends also to alumni.

The major colleges have individual placement offices, while remaining colleges and most departments have designated faculty placement counselors. Any placement office, student service office, or college office can provide information on placement offices and placement counselors.

The Coordinating Placement Office on the ground floor of the Student Services Building provides liaison among placement offices and offers placement service to liberal arts and other nontechnical degree candidates. Campus placement offices are supplemented by the Chicago Placement Office in the Illini Center on the twentieth floor of the LaSalle Hotel.

The primary sources of career information are as follows:

1. **Vocational Literature, Employer Literature, and Placement Directories.** The major placement offices maintain libraries of placement materials. In addition, a comprehensive collection of vocational literature may be found in the Reference Room of the Main Library.

2. **Current Job Listings.** Day-to-day employee needs are reported throughout the year to campus offices by employing organizations. These listings are made available, upon request, to students and to alumni.

3. **On-campus Interviews.** Hundreds of employer representatives visit the campus each semester to talk with degree candidates who meet objective qualifications which are provided in advance by the employers. All placement offices put out announcements of these visits to all students who have indicated an interest in the information.

Psychological testing for vocational guidance purposes may be arranged at the Psychological and Counseling Center.

The services of the placement offices are available to students of all academic levels, at all times throughout the calendar year. Wise planning dictates that students make full use of the services which are provided for their benefit.

FEES AND EXPENSES

In planning to meet financial requirements for the school year 1971–72, students should be aware that tuition rates at state universities will not be finally known until their budgets are approved for that period by the General Assembly in the spring of 1971. The Board of Higher Education has undertaken a study of tuition charges and financial-aid programs and is expected to make recommendations to the Governor and the General Assembly for consideration in the budgetary deliberations during the next legislative session.

Estimated moderate expenses for unmarried undergraduate students attending the University of Illinois at Urbana-Champaign, exclusive of such variable items as major articles of clothing, household expenses, and recreation, are given in the budgets below. These budgets cover two semesters, and are subjct to change.

	ILLINOIS RESIDENTS	NON-RESIDENTS
Tuition	$ 396.00	$1,254.00
Required fees	152.00	152.00
Textbooks and other school supplies	140.00	140.00
Double room and board (residence hall rates for nine months)		
Men: Room ($435.00) and board ($600.00)	1,035.00	1,035.00
Women: Room ($395.00) and board ($600.00)	995.00	995.00
Travel allowance (to and from home)	55.00	107.00
Miscellaneous	554.00	554.00
(including local transportation, personal and miscellaneous expenses, and provision for Sunday evening meals, which are not included in University residence hall charges)		
Totals, Two Semesters	$2,292.00 to $2,332.00	$3,202.00 to $3,242.00

In certain fields such as art, architecture, and engineering, costs of textbooks and other school supplies run somewhat higher. The room and board cost could be lowered somewhat by arranging for a triple instead of double room, or by living in cooperative housing, and the miscellaneous items could be reduced by careful attention to personal spending.

In addition to the annual expenses listed above, applicants for admission or readmission must submit with their applications a non-refundable application fee of $15.00. (See page 137.)

For information on determination of residence classification for assessment of resident and nonresident tuition, see page 34; for rules governing assessments and exemptions from tuition and/or fees, see page 138.

Tuition and Fees (Subject to Change)

Tuition and fees are payable in full when the student registers, unless the installment plan is elected.

Registration in less than a full program of studies requires approval by the dean of the student's college, or his delegated representative. Tuition and fees are assessed in accordance with the amount of credit hours for which the student registers.

Credit ranges for registration and fee assessment in the undergraduate and graduate colleges have been established at Urbana-Champaign as follows:

SEMESTER

	Full Program		Partial Programs				
	Range I		Range II		Range III		Range IV
	Above 10 semester hours Above 2½ units		Above 5 through 10 semester hours Above 1¼ through 2½ units		Above 0 through 5 semester hours Above 0 through 1¼ units		0 credit only Resident and Non-resident
	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	
Tuition (except those holding exemptions)	$198.00	$627.00	$137.00	$430.00	$ 76.00	$236.00	$38.00
Service Fee	58.00	58.00	37.00	37.00	15.00	15.00	8.00
Hospital-Medical-Surgical Fee	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Total	$274.00	$703.00	$192.00	$485.00	$109.00	$269.00	$64.00

TWELVE-WEEK SUMMER TERM (SOCIAL WORK AND INSTITUTES) AND ELEVEN-WEEK SUMMER LAW PROGRAM*

	Full Program		Partial Programs				
	Range I		Range II		Range III		Range IV
	Above 8 semester hours Above 2 units		Above 4 through 8 semester hours Above 1 through 2 units		Above 0 through 4 semester hours Above 0 through 1 unit		0 credit only Resident and Non-resident
	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	
Tuition (except those holding exemptions)	$132.00	$418.00	$ 92.00	$287.00	$50.00	$157.00	$25.00
Service Fee	44.00	44.00	29.00	29.00	15.00	15.00	8.00
Hospital-Medical-Surgical Fee	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Total	$194.00	$480.00	$139.00	$334.00	$83.00	$190.00	$51.00

EIGHT-WEEK SUMMER SESSION

	Full Program		Partial Programs				
	Range I		Range II		Range III		Range IV
	Above 5 semester hours Above 1¼ units		Above 2½ through 5 semester hours Above ¾ through 1¼ units		Above 0 through 2½ semester hours Above 0 through ¾ unit		0 credit only
	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident and Non-resident
Tuition (except those holding exemptions)	$ 99.00	$314.00	$ 69.00	$215.00	$38.00	$118.00	$19.00
Service Fee	29.00	29.00	22.00	22.00	8.00	8.00	4.00
Hospital-Medical-Surgical Fee	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Total	$146.00	$361.00	$109.00	$255.00	$64.00	$144.00	$41.00

* Students registered in *either* one of the five and one-half week summer law sessions pay one-half of the tuition and Service Fee established for the twelve-week term, rounded to the next higher even dollar, and one-half the credit amounts indicated apply in Ranges I, II, and III. They are also subject to the same Hospital-Medical-Surgical Fee applying to registrants in the eight-week summer session.

See page 138 for a complete statement of rules governing assessments and exemptions from payment of tuition and/or fees.

Special Fees

Urbana-Champaign Campus

Application Fee

Applicants for admission or readmission to the University must submit with their application a nonrefundable fee of $15.00
(See page 137.)

Bicycle Code Violations

Violation for which other penalty is not provided 3.00
Failure to pay or appeal violation assessment within five school days after notice, penalty increased to 5.00

Concurrent Registrations

Students concurrently enrolled in the University of Illinois at Urbana-Champaign and another collegiate institution pay the tuition and fees regularly assessed at each institution in accordance with the amount of work taken. Students concurrently enrolled at more than one campus of the University pay at their primary campus the applicable tuition and fees for their total combined registrations.

Correspondence and Extramural Instruction

Correspondence Courses

Persons enrolled in correspondence courses pay a tuition fee:
For each semester hour of credit..... 15.00
For each quarter hour of credit 10.00
Persons enrolled in correspondence courses who are granted a six months' extension of the enrollment period pay for each course an additional charge of..... 5.00

(This additional charge is not covered by scholarships or other tuition exemptions.)

Extramural Courses

Credit Courses

For each semester hour or ¼ graduate unit..... 15.00
For each quarter hour..... 10.00

Noncredit Courses

For each sixteen hours of instruction..... 15.00

Visitors

Visitors in extramural courses pay the same tuition as students registered in the course for credit. In the case of multiple credit courses, the visitor pays the fee applicable to the lowest credit provided in the course.

Students who register in more than one correspondence or extramural course concurrently pay the full amount of tuition for each course.
Students who register for courses on campus and for correspondence or extramural study concurrently pay the full amount of tuition and fees applicable for each registration.
Holders of staff appointments with the University or allied agencies, holders of tuition scholarships, unless such scholarships are specifically limited by law to courses for residence credit only, and holders of tuition and fee waivers which exempt from tuition for campus work are also exempt from tuition or the Visitor's Fee for extramural or correspondence courses begun within the term of the appointment.
Resignation or cancellation of an appointment within the term in which the student registered which has provided exemption from tuition for a correspondence course, and prior to completion of at least three-fourths of the required lessons in the course, shall make the student liable for the full amount of the tuition for the course.
A student exempted from the tuition for a correspondence course by reason of a scholarship, staff appointment, or other waiver, who fails to complete the course within the normally allotted time of one year and arranges for extension of the enrollment period, shall become subject to payment of the full tuition for the course at the time he requests extension of the enrollment period if he no longer holds an appointment which entitles him to exemption. The additional $5.00 fee required for extension of the enrollment period is considered a "fine" and is not included in the tuition exemption privileges. A nonacademic employee registered concurrently for campus and extramural or correspondence courses whose total registration exceeds the Range authorized by his tuition waiver pays the difference between the waiver authorization and the higher Range in which his total registration places him.

Deposits

Advance Deposit on Tuition and Fees..... 30.00
(See page 137.)

Advance Deposit on Total Registration Fee for Experimental Youth Fitness Summer Day School..... 10.00

Housing Contract Deposit (Urbana only)
This advance deposit is required to confirm a contract for University housing.
First semester..... 40.00

One-half of this amount ($20.00) is applied on the first semester's rent; the other half ($20.00) is applied on the second semester's rent.

Second semester only 20.00
Summer session 20.00

Duplicate Identification Photo Cards (payable at the Bursar's Office) 1.00
This fee is waived upon receipt of written authorization from the Dean of Student Personnel in such cases as lost by theft, robbery, assault, or fire.

Flight Training

In addition to the regular tuition and fees, students taking flight training pay:

For each flight course a materials and supply fee of 550.00
For each glider course a special fee of 245.00
For Aviation 100, per student 125.00
For Aviation 222, per student 350.00
(*These fees are not included in scholarship and staff fee exemption provisions.*)

Installment Payment Service Charge

Installment payment of tuition and fees 2.00
Installment payment of flight or glider training fees, per course 2.00
Installment payment of special fee for Aviation 100 ..... 2.00
(See page 137.)

Late Registration

A student's registration is not complete until his tuition and fees have been paid in full, or he has made arrangements with the Bursar's Division for deferment of payment.

Students who register late in any term pay the same tuition and fees as students registering at the beginning of the term. In addition, all students, whether on appointment or not, who complete registration for work in residence after the close of the regular registration days in any term pay a late registration fine of 15.00
(*The late registration fine may be waived in exceptional circumstances upon petition to the Director of Admissions and Records. This fine is not covered by scholarships or other tuition waivers.*)

Motor Vehicle Registration (Consult Current Regulations)

Automobiles

Nonrefundable annual registration fee, September to September 5.00
Penalty for nonregistration 25.00

Motorcycles (including Motor Scooters and Motor Driven Bicycles)

For the year 3.00
For the second semester only 1.50
Violation of registration, operating, or parking regulation 3.00

N.R.O.T.C. Student Activity Fund Assessment 5.00
Each enrolled N.R.O.T.C. student is assessed this Student Activity Fee each semester. (This assessment is collected by the Navy Council.)

Off-Campus Courses

Students registered for credit in off-campus work only, such as field courses, are exempt from the Service Fee. They pay the same tuition, resident or nonresident, assessed for campus registration of equal credit, and the insurance portion ($10.00) of the Hospital-Medical-Surgical Fee.

Students registered in Engineering 102 (Cooperative Engineering Education Program) and other zero-credit courses off-campus, including graduate registrations *in absentia*, pay Range IV tuition but no Service Fee and no Hospital-Medical-Surgical Fee. (See complete statement on zero-credit courses on page 136).
(For the purpose of fee assessment, the designation 'Off-Campus Course' refers to field courses, programs of study abroad, or special programs established which *require* that the participants be absent from the campus for the entire semester, term, or session.)

Recreational Facilities

These charges are subject to revision and do not include the use of the new Intramural-Physical Education recreational building facilities.

Students registered in the University, members of the University staff, and wives or husbands of students or University staff members may use the recreational facilities of the University without charge.

Families, including children, of members of the staff of the University, pay a fee as follows:

For the semester	4.00
For the entire summer period	4.00

All persons who are not registered in University classes or on University appointment, and their spouses, who desire to use the recreational facilities of the University pay a fee as follows:

For the semester	12.00
For the eight-week summer session	6.00

There is no reduction in these fees for persons entering late. No additional fee or deposit is required for use of locker, padlock, or towel in buildings where their use is possible.

The above fees include only recreational facilities operated by the University, e.g., the swimming pools, gymnasiums, archery range, and tennis courts; they do not include facilities operated by the Athletic Association or the Illini Union, i.e., the Ice Rink, golf courses, billiard room, and bowling lanes, for which an individual charge is made.

Smoking Violations

Students found guilty of violation of smoking regulations are subject to a cash penalty of 1.00

Special Examination

Courses which have been failed	10.00
Graduate Student Language Examinations, for students who fail the first examination	6.50

Transcript

Each student who has paid all his University fees is entitled upon request to receive without charge one transcript of his record. For each additional transcript the fee is 1.00
No charge is made if the request for a transcript is accompanied by a teacher's certificate application blank, and no charge is made for transcripts of records issued to the Chicago Circle or the Medical Center campuses of the University of Illinois in Chicago.
Transcripts issued at the request of students for whom possible disciplinary

action is pending are followed by a corrected transcript issued without charge to the original recipient showing the final status in the event that the student involved is subsequently placed on disciplinary probation or is dismissed from the University as a result of the pending action.

University Fee for High School Students

High school students, including University High School, attending the University under "Early Admission" plans, etc., pay the same tuition and fees assessed against University students registered for the same amount of credit, except that fees for registration in a departmental honors program will not exceed those for registrations in the comparable non-honors course.

University High School Instruction

University students at Urbana-Champaign who also register in University High School pay, in addition to their University fees, for each half unit each semester (provided that the total additional charges shall not exceed $25.00 a semester) 10.00

Students other than those registered in the University pay a tuition fee for each semester, as follows:

For one course only	10.00
For a full-time high school program	None

Unredeemed Check Service Charge

For each check returned by a bank to the Business Office for insufficient funds or other reasons 2.00

Visitor's Fee (Campus Courses)

Persons holding scholarships, tuition waivers, or staff appointments which exempt from tuition for campus work, unless such scholarships are specifically limited by law to courses for residence credit only, may attend University classes as visitors only without charge. Persons registered on campus for a full program of courses (Range I) may also attend other courses as a visitor without additional charge.

Persons not otherwise registered in University courses and students registered on campus on a partial program fee schedule (Range II, III, or IV) are charged for each course attended, as a visitor only, a fee of 15.00

(Students who change from credit registration to visitor status *in the same course,* who are not eligible for refund of tuition or fees for the credit registration dropped, are not charged the Visitor's Fee. A student attending as a visitor only is not considered to be a student in residence.)

Zero-Credit Courses (Urbana-Champaign)

Students (except those holding exemptions) who register in zero-credit courses pay tuition and fees as follows:

1. Students taking one or more courses for zero credit, but no courses for credit, are assessed for tuition and fees as follows:
   a. *For study on campus:* Range IV tuition and fees. (No charge will be assessed, however, for University employees who register, at the request of their department, only in zero credit courses especially established to improve the work of the employee.)
   b. *For study off campus,* including graduate registration "in absentia": Range IV tuition but no Service Fee and no Hospital-Medical-Surgical Fee.

2. Students taking one or more courses for zero credit with one or more courses for credit are assessed for tuition and fees on the basis of the credit course(s) only.

Application Fee

Except as indicated below, each applicant for admission or readmission to the University at Urbana-Champaign, with the exception of extramural non-degree applicants and members of the faculty and staff of the University or of the allied agencies, must submit with his application a nonrefundable application fee of $15.00. This fee is not applicable on tuition and/or fees. Requirement of the application fee for graduate extramural degree applicants is deferred until such time as the student applies for work in residence. Graduate degree students who register in consecutive summers are subject to the application fee only one time, since they are not required to reapply each summer. Applicants denied admission to one campus of the University who apply immediately to a second University of Illinois campus are not subject to a second application fee.

The Director of Admissions and Records is authorized to waive the fee in cases of applicants who, because of extreme financial hardship, could not meet the cost of the application fee.

Participants in the Special Educational Opportunities Program and foreign students recruited through the African Graduate Program (AFGRAD) and Latin-American Scholarship Program of American Universities (LASPAU) programs, and C.I.C. Traveling Scholars from other universities are exempt from this fee.

Because the $15.00 application fee is utilized to defray processing costs, it is nonrefundable for both approved and denied applicants. This includes applicants who submit partial as well as complete applications prior to the date all spaces are filled in the college and curriculum of their choice.

Advance Deposit on Tuition and Fees

Each eligible new and readmitted undergraduate and professional student (except foreign students who, at the time of application, are residing outside the United States) who wishes to register for a fall or spring semester on the Urbana-Champaign campus is required to make an advance deposit of $30.00 in order to secure the place reserved for him. This includes students transferring from the Chicago Circle campus and students newly admitted to the Colleges of Law and Veterinary Medicine.

This is not an additional cost for attending the University but is applied to each student's tuition and fees in the semester for which he is approved. In case the student fails to enter the University in that semester, the deposit may not be applied toward any future registration. The deposit should not be sent until requested by the University. It is nonrefundable except in very special cases. It will be refunded to holders of scholarships which cover both tuition and fees.

New and readmitted students residing outside the United States at the time of application may confirm their intentions to register without payment of the advance deposit.

The Director of Admissions and Records is authorized to waive the requirement of the advance deposit in cases of extreme financial hardship when evidence clearly indicates that such students will be able to meet their University obligations later through scholarship aid or other arrangements.

Installment Plan for Payment of University Fees and Housing Charges

Students enrolled on the Urbana-Champaign campus are given the option of paying tuition, fees, and residence hall charges (in the case of single student housing only) on an installment basis. Tuition and fee charges for each of the first and second semesters are collected in four installments, the first payable at registration and the

others in each of the following months. The advance deposit, if paid, is applied on the first installment. If this results in overpayment, the remainder is applied on subsequent installments.

Summer session charges are payable approximately one-half at registration and the remainder during the following month. This plan does not apply to registration in extramural and correspondence courses, or to University housing contracts on an annual lease basis, which are payable monthly.

Students electing the installment plant for payment of tuition and fees are assessed a $2.00 service charge. An additional service charge of $2.00 is assessed in the cases of each flight instruction course fee, if paid on the installment basis. There is no service charge for the payment of University housing accounts on the installment basis. Arrangements for payment on the installment plan are made with the Bursar's Division of the Office of Business Affairs in the Armory during regular registration days or in 100b Administration Building, during late registration.

Assessments and Exemptions

Tuition and fees are assessed all students, as applicable. The nonresident tuition fee is assessed against those student who are defined as nonresidents of Illinois under the *Regulations Governing the Determination of Residency States for Admission and Assessment of Student Tuition.* (See page 34).

For tuition and fee assessment purposes, a staff appointment must be to an established position for a specific amount of time and a salary commensurate with the percentage of time required, and it must require service for not less than three-fourths of the term. (This is interpreted as a minimum of three and one-half months in a semester, nine weeks in a quarter, and six weeks in an eight-week summer session.) *Staff tuition and fee privileges do not apply to students employed on an hourly basis in either an academic or nonacademic capacity,* or to persons on leave without pay.

University employees appointed to established Civil Service positions whose rates of pay are determined by negotiation, prevailing rates, union affiliation, etc., are *not* considered as paid "on an hourly basis" and are entitled to the same tuition and fee privileges accorded to other staff members under the regulations.

Any student who resigns his staff appointment, or whose appointment is cancelled, before rendering service for at least three-fourths of the term becomes subject to the full amount of the appropriate tuition and fees for that term unless he withdraws from his University classes at the same time the appointment becomes void. Such a student is not assessed tuition and fees for that term if he files clearance for graduation within one week after the appointment becomes void.

Unless otherwise exempted by Board of Trustees' authorization, the payment of tuition and fees is required of academic employees of the University or allied agencies under appointment for less than 25 per cent of full time, and of nonacademic employees under appointment for less than 50 per cent of full time.

Exemptions

CIC Traveling Scholars from other collegiate institutions pay appropriate tuition and fees at their home institutions; they pay no tuition or fees for their work on this campus.

Other students may be exempted from one or more of the usual charges if they qualify under the conditions indicated below.

A. APPLICATION FEE IS WAIVED FOR:

1. Members of the academic and nonacademic staff of the Univesrity and of the allied agencies on appointment at the time of application.

2. Extramural non-degree applicants.

3. Graduate extramural degree candidates until such time as they apply for work in residence.

4. Participants in the Special Educational Opportunities Program.

5. Foreign students recruited through the African Graduate Program (AFGRAD) and Latin-American Scholarship Program of American Universities (LASPAU) programs.

6. C.I.C. Traveling Scholars from other universities.

B. TUITION IS WAIVED FOR:

1. Holders of tuition waiver scholarships.

2. All academic employees of the University or of allied agencies on appointment for at least 25 per cent but not more than 67 per cent of full-time services. (Limits of enrollment for academic employees registered in the Graduate College are given in the Graduate College catalog; limits of enrollment for academic employees registered in undergraduate colleges are determined by the college concerned.)

3. Holders of graduate tuition and fee waivers awarded by the Graduate College.

4. Holders of grants or contracts from outside sponsors which provide payments to cover the total costs of instruction.

5. Cooperating teachers and administrators who receive assignment of practice teachers. (Exemption is provided in one semester, quarter, or summer session for each semester or quarter of assignment within the same calendar year—September through August.)

6. University academic employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.

7. Academic staff members emeriti.

8. Nonacademic employees of the University in status appointments or in appointments designed to qualify for status in an established class (e.g., Trainee, Intern, etc.) for at least 50 per cent of full-time who register in regular University courses for not to exceed:
   a. Six credit hours or two courses in a semester or quarter if on full-time appointment,
   b. Four credit hours if on a 75 per cent to 99 per cent time appointment, or
   c. Three credit hours if on a 50 per cent to 74 per cent time appointment,

   provided that (1) they meet conditions and eligibility for admission as prescribed by the Office of Admissions and Records, (2) are not students as defined in Civil Service Rule 7.7c, and (3) have approval by their employing departments of enrollment and of a "make-up" schedule to cover any time in course attendance during their regular work schedule.
   The waiver of tuition also applies to any additional hours of registration by an employee which keep him within the same fee assessment credit range. An employee whose total registration is in a higher range than that authorized by his tuition waiver pays only the difference between the waiver authorization and the higher range in which his total registration places him.

9. Nonacademic employees in a Status, Learner, Trainee, Apprentice, or Provisional appointment may enroll without payment of tuition in regular courses directly related to their University employment for not to exceed ten credit hours per semester provided they have made application and received prior approval for

enrollment as required by procedures issued by the Director of Nonacademic Personnel and set forth in *Policy and Rules—Nonacademic.*

C. NONRESIDENT PORTION OF TUITION (IF SUBJECT TO PAYMENT OF TUITION) IS WAIVED FOR:

1. All staff members (academic, administrative, or permanent nonacademic) on appointment for at least 25 per cent of full time with the University or the allied agencies.
2. The faculties of state-supported institutions of higher education in Illinois holding appointments of at least one-quarter-time.
3. The teaching staff in the private and public elementary and secondary schools in Illinois.
4. The spouses and dependent children of all staff members (academic, administrative, or nonacademic) on appointment with the University or the allied agencies, and of those listed in item 2 above. (Dependent children are those who qualify as dependents for federal income tax purposes.)
5. The spouses and dependent children of fellows and trainees who are employed as teaching assistants to the extent permitted by their fellowship appointment.
6. Persons actively serving in one of the Armed Forces of the United States who are stationed and present in the state of Ilinois in connection with that service.
7. The spouses and dependent children of those listed in item 6 above, as long as they remain stationed, present, and living in this state.

For those listed in Items 1 through 5 above who are eligible for such waiver in the final term of the academic year, except as indicated under Summer Session below, this privilege is also extended to the summer session immediately following.

D. SERVICE FEE IS WAIVED FOR:

1. All academic staff members of the University or allied agencies on appointment for at least 25 per cent of full time.
2. Holders of graduate tuition and fee waivers awarded by the Graduate College.
3. Students registered *in absentia.*
4. Students registered in courses taught off campus, or in off-campus Engineering 102 (Cooperative Engineering Education Program) only.
5. Holders of grants or contracts from outside sponsors if this fee is charged to the contract or grant funds.
6. Cooperating teachers and administrators described under B, item 6, above.
7. University academic employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.
8. Academic staff members emeriti.
9. Nonacademic employees of the University exempted from tuition as specified under Sections B,8 and B,9.

E. HOSPITAL—MEDICAL—SURGICAL FEE IS WAIVED FOR:

1. Persons registered for doctoral thesis research *in absentia.*

2. Holders of grants or contracts from outside sponsors if this fee is charged to the contract or grant funds.

3. Students for whom this fee has been assumed by the Graduate College.

4. University employees registered at the request of their departments in zero-credit courses especially established to improve the work of the employee.

5. Persons registered in Engineering 102 (Cooperative Engineering Education Program) and other off-campus courses for zero credit.

Upon approval of a petition presented to the University Insurance Office not later than the final day established for a full refund of fees, students presenting evidence of equivalent coverage are exempted from the *insurance portion* of the Hospital-Medical-Surgical Fee ($10.00). Except as indicated above, *all* students not totally exempt who are registered for courses on campus are required to pay the McKinley Hospital portion of the fee ($8.00).

Students not enrolled in the summer session who elect to extend their insurance over the summer are required to complete an application with the University Insurance Office and pay the $10.00 insurance portion of the regular semester Hospital-Medical-Surgical Fee. The McKinley Hospital portion ($8.00) of this fee is not assessed, and this coverage is not included for students who are not enrolled in the summer session.

SUMMER SESSION TUITION AND FEES ARE WAIVED AS FOLLOWS:

1. Students holding appointments to the close of the final term of an academic year either as employees or fellows, and for whom tuition and/or fees have been provided through waiver or through cash payment by an outside agency, are entitled to a waiver of the same kinds of tuition and fees for the summer session immediately following, provided they hold no appointments during that summer session.

2. Students holding summer session appointments as fellows or as employees are subject to such tuition and fees as would be assessed in accordance with the principles expressed above.

Refunds

1. Cancellation of Registration
   A continuing student who pays tuition and fees for any term and who subsequently cancels his registration prior to the first day of classes of that term shall be refunded the full amount of his payment, including the usually nonrefundable charge.

2. Withdrawal
   A student subject to tuition and/or fees who files clearance papers for withdrawal from the University during any semester, term, or session for reasons other than military or other approved National Defense Service (see page 143), receives refunds as indicated below. A certain portion of the tuition and/or fees assessed is nonrefundable.[1] When the total assessment has been less than the stipulated nonrefundable portion, the full amount of the assessment, if any, is nonrefundable.

In a Semester, Twelve-Week Term, or Eleven-Week Summer Law Program

a. *During the first ten days of instruction in a semester or term,* refund is made of the full amount of the tuition and fees assessed except for a nonrefundable charge of $47.00.

[1] The nonrefundable charge includes the Hospital-Medical-Surgical Fee, if originally paid, and the student who withdraws from the University continues to be covered by the insurance and McKinley Hospital services until the close of the semester, term, or session. (The amounts of the nonrefundable charge are subject to change.)

b. *After the first ten days but within the first half of the semester or term,* one-half of the total amount of the tuition and fees assessed which remains after deduction of the above mentioned $47.00 is refunded.

c. *After the midpoint of the semester or term,* no refund is allowed.

In an Eight-Week Summer Session or a Five and One-Half Week Summer Law Program

a. *During the first five days of instruction in the summer session,* refund is made of the full amount of the tuition and fees assessed except for a nonrefundable charge of $33.00.

b. *After the first five days but within the first half of the summer session,* one-half of the amount assessed which remains after deduction of the above mentioned $33.00 is refunded.

c. *After the midpoint of the summer session,* no refund is allowed.

Withdrawal for National Defense Service

In cases of withdrawal for active service in the Armed Forces or other approved National Defense Service (see page 143), special refund provisions have been adopted by the University, as follows:

a. *Withdrawal prior to credit allowance,* full refund, except for the nonrefundable Hospital-Medical-Surgical Fee.

b. *Withdrawal during the half-credit period,* one-half refund, except for the nonrefundable Hospital-Medical-Surgical Fee.

c. *Withdrawal during the full credit period,* no refund.

3. **Reduction of Program**

A student who reduces his registration to a lower fee assessment range receives a refund of the full amount of the difference in tuition and fees specified for such schedules provided the changes are made during the period designated for refund of full fees in case of withdrawal from the University. One-half the above difference is refunded if the changes are made during the period for one-half refund in case of withdrawal from the University. Thereafter, no rebate is allowed.

4. **Visitors**

A person registered as a Visitor who desires to withdraw receives a full refund of the Visitor's Fee, if originally charged, provided he makes personal request for a refund at the Office of Admissions and Records within the full rebate period in any semester, term, or session. Thereafter, no rebate is made.

5. **Flight Training**

A student who withdraws from a flight-training or glider course receives a refund of the full flight-training, glider, Aviation 100, or Aviation 222 course fees during the first ten days of instruction in a semester or the first five days of instruction in the eight-week summer session; a half refund during the remaining first half of the term; and no refund thereafter.

6. **Students Dismissed**

Tuition and fees of a student dismissed from the University during any term are refunded on the same basis as indicated above for a student who withdraws with permission.

7. **Students Indebted to the University**

Students indebted to the University at the time of withdrawal will have the amount owed deducted from the rebate.

8. **University Terms of Different Lengths**

For University terms of different lengths of time, the full and half refund periods and the amount of the retained portions of the fees are determined proportionately in accordance with the above principles.

9. **Hospital-Medical-Surgical Fee**

In no case is the insurance portion of the Hospital-Medical-Surgical Fee refunded except upon approval of the student's petition by the Supervisor of University Insurance; the McKinley Hospital portion is nonrefundable.

ACADEMIC AND OTHER REGULATIONS

A student should familiarize himself with the academic and other regulations of the University. He is responsible for complying with the regulations of the University, of his college, and of the departments from which he takes courses, and for fulfilling all requirements for his particular degree.

At the time of his first registration in each academic year in the University, each undergraduate student receives a copy of the latest edition of *Regulations Applying to All Undergraduate Students* which provides him with complete information concerning conditions governing his attendence at the University. Copies may also be obtained from the Office of Admissions and Records. Copies of the *Student Handbook* are available upon request from the Office of the Dean of Student Personnel, 130 Student Services Building.

A brochure describing in detail the policies, structure, and jurisdiction of the disciplinary bodies pertaining to undergraduate students is available at the Office of the Senate Committee on Student Discipline, 310 Student Services Building.

WITHDRAWAL FROM THE UNIVERSITY

A student who leaves the University during any semester, term, or summer session should submit clearance papers which may be obtained from the dean of his college. Otherwise, grades in the courses he is pursuing appear upon his record as "Ab" (absent, or failure). If at the time of withdrawal he is seriously deficient in his academic work, the student may be required by the dean of his college to accept the grade of "E" in one or more of his courses. At the discretion of the dean of his college, a student may be dropped or placed on probation for poor scholarship as of the date of his withdrawal.

A student who withdraws from the University within the last three weeks of instruction in any semester or within the last two weeks in any summer session or term, or a student whose status can not be determined because of excused grades, may register again only on petition approved by the dean of his college.

A student who has been charged with an offense which may result in disciplinary action may not officially withdraw from the University until the hearing of his case has been conducted by the appropriate disciplinary committee.

WITHDRAWAL FROM THE UNIVERSITY FOR MILITARY OR OTHER NATIONAL DEFENSE SERVICE

Any undergraduate or professional student at Urbana-Champaign who withdraws from the University in order to enter into active service with the Armed Forces of the United States or other country, or other service pertaining to the national defense which is approved by the appropriate University Committee is entitled under certain circum-

stances to receive full or half credit in some or all of the courses in which he is registered at the time of withdrawal. A complete statement of the regulations governing the granting of credit in such cases is given in the current edition of the *Regulations Applying to All Undergraduate Students.*

RELEASE OF STUDENT ACADEMIC RECORDS

A. TO AGENCIES OR PERSONS OUTSIDE THE UNIVERSITY

The student's name, dates of attendance, curriculum, degrees earned, and honors earned are considered public information. Individual student written requests to have other information withheld from agencies or persons outside the University are honored.

Undergraduate students wishing to take such action should go to the Records Section of the Office of Admissions and Records located in Room 69 Administration Building. They will then sign a statement each term requesting that the Office of Admissions and Records not send their academic records to agencies or persons outside the University, including grade reports to parents. The signing of this statement does not preclude professional staff members in the college offices or academic departments from discussing with parents the scholastic progress of their sons and daughters.

In the absence of such a request, the following policies are applied to the release of information to agencies or persons outside the University:

1. Personal information such as address, phone number, and age will be confirmed. The information itself will not be divulged except as reported in current publicly available directories. No academic information on a specific student other than that noted as public information will be given by phone.

2. Transcripts are released only on the student's request to whomever he designates.

3. Reports of final grades are mailed by the Office of Admissions and Records to undergraduate students in good standing and their parents or guardians, and to all graduate and professional students.

4. Upon written authorization of the student concerned, representatives of outside agencies, including governmental agencies, may see student records in our offices, or such information may be sent to them.
   The listing, on a document bearing the student's signature, of the University of Illinois as a reference which may be contacted, will be considered as written authorization by the student.

5. The Director of Admissions and Records may release student academic information to educational institutions and agencies in the interest of research provided he is assured that individual anonymity will be guaranteed.

6. The Director of Admissions and Records may also release academic information in the interest of financial assistance or honorary recognition of the student.

B. TO AGENCIES OR PERSONS WITHIN THE UNIVERSITY

1. All requests to the Administrative Data System from individuals, departments, and/or groups of departments, except the offices of the President, the Provost, the Chancellor, or Institutional Research, for data based on confidential records of students in a particular college must first be cleared through the appropriate college office.

2. Requests involving students in more than one college must be cleared through the Director of Admissions and Records.

C. CREDENTIALS PRESENTED FROM OTHER SOURCES

All credentials presented for admission or readmission to the University of Illinois become the property of the University and are not subsequently released to the student or to another individual or institution.

D. NOTIFICATION OF DROP OR PROBATIONARY STATUS

Undergraduate students dropped from the University or placed on probation for poor scholarship and their parents or guardians are notified of this action and are sent reports of final course grades by their respective colleges.

SELECTIVE SERVICE DEFERMENT

College students are not automatically deferred from military service. The individual local Selective Service Boards make the final decision regarding a student's status based upon currently acceptable criteria for reclassification or deferment. Generally, the following are the factors considered in determining whether or not the deferment may be granted to undergraduate students:

1. Student's request for II-S deferment (usually submitted on SSS Form 104).
2. A statement of his expected date of graduation.
3. Registration status: full-time (twelve or more semester hours) or part-time.
4. Year of study in which the student is currently engaged, and years of study completed.

It is the student's responsibility to request and complete a Selective Service Information Release form which will make it possible for the Office of Admissions and Records to inform his local Selective Service Board of his current student status. The form is mailed to new freshman, transfer, and readmitted students. Students who are under eighteen years of age at the time they receive the permit to enter the University must go in person to Room 69, Administration Building, to complete a Selective Service Information Release form. This should be done as soon as possible after receiving the Selective Service number following registration with their local Board. Information is not released to local Selective Service Boards except at the request of the student.

GRADING SYSTEM

Faculty members have the responsibility to provide the University with an individual evaluation of the work of each student in their classes.

Final course grades are entered on the student's permanent University record at the close of each semester, term, or session.

The University of Illinois grading system is as follows:

COURSES IN ALL COLLEGES EXCEPT THE COLLEGE OF LAW

A = excellent; B = good; C = fair; D = poor (lowest passing grade). E = failure, including courses dropped for academic irregularities; Ab. = absent from the final examination without an excuse acceptable to the dean of the college concerned (counts as a failure). Plus and minus signs are not authorized with these grades.

COURSES IN THE COLLEGE OF LAW

In addition to the above grades, instructors in the College of Law are authorized to assign grades of B+ and C+.

COMPUTATION OF SCHOLASTIC AVERAGES

For numerical computation of scholastic averages, the following values are designated: A = 5.0; B+ = 4.5; B = 4.0; C+ = 3.5; C = 3.0; D = 2.0; E and Ab = 1.0.

UNIFORM METHOD FOR CALCULATION

A uniform method for calculating undergraduate grade-point averages has been established for all undergraduate colleges on the Urbana-Champaign campus. With the exception of the calculation of grade-point averages for graduation and for admission of transfers, all undergraduate grade-point averages are calculated on the basis of all courses attempted for which grades are assigned, and which carry credit in accordance with the *Undergraduate Courses* catalog, excluding (1) courses and grades of pass or fail, (2) courses and grades earned in the basic instructional program of physical education (courses numbered below 150), and (3) courses offered and grades assigned by religious foundations on or near the Urbana-Champaign campus.

This method of calculation is used to determine honors, probation and drop status, financial aids and scholastic awards, and transfers between colleges on this campus. The special method used to determine eligibility for transfer into the University is described on page 52.

OTHER SYMBOLS IN USE (not included in computation of averages)

W—Officially withdrawn from the course without penalty (withdrawal notice received from the Administrative Data Processing Unit).

Ex—Temporarily excused. Approved extension of time to complete the final examination or other requirements of the course. Applies to *both* undergraduate and graduate students. (Entitles the student to an examination later without fee, or additional time to complete other requirements of the course. The final grade must be reported on the "Supplemental Grade Report Form.")

Undergraduate Students: Only the dean of his college may authorize such an extension of time in individual cases.

A grade of "Ex" which is not removed by the time the mid-semester grades are reported in the semester following the receiving of the excused grade, if the student is enrolled in an undergraduate college on the Urbana-Champaign campus of the University in that semester, automatically becomes a grade of "E." If the student receiving an excused grade does not re-enroll in the University, the excused grade, if not removed, becomes an "E" after one calendar year. (See rule on final examinations in the current edition of *Regulations Applying to All Undergraduate Students* for a complete statement of governing rules.)

Graduate Students: Graduate students who are unable to take the final examination at the scheduled time or to complete other requirements of a course must make individual arrangements with their instructors.

All "excused" grades for graduate students must be replaced by letter grades not later than the end of the next semester in which the student is registered. Failure to complete the work by that time will result in a grade of "E" being recorded.

Df—Grade temporarily deferred. To be used only in those thesis, research, and special problems courses extending over more than one semester which are taken by graduate students as preparation for the thesis and by undergraduate students in satisfaction of the requirements for graduation with honors, and in other *approved courses which extend over more than one semester.*

Requests for use of the Df grade in other courses which extend over more than

one semester, and which therefore require postponement of the final grade report, must be submitted in writing by the executive officer of the department offering the course to the Director of Admissions and Records prior to the beginning of the final examination period for which the approval would first apply. (A current list of courses which have received such approval is maintained in the Office of Admissions and Records.)

S—Satisfactory, and

U—Unsatisfactory. To be used only as the final grade in graduate thesis research courses, in graduate and undergraduate courses given for zero credit, and in other courses which have been specifically approved by the Chancellor. (English 491, Entomology, 426, Law 317–318, 362, 391–392, 393–394, Rhetoric 103, Social work 468–469, and Zoology 490 have received such specific approval.)

P—Pass. To be used only in courses taken under the pass-fail grading option. (Instructors report the usual letter grades. Grades of A, B, C, and D will automatically be converted to P.)

F—Fail. To be used only in courses taken under the pass-fail grading option. (Instructors report the usual letter grades. Grades of E or Ab will automatically be converted to F.)

Pass—To be used only in courses passed by special or proficiency examinations. (A minimum grade of "C" is required to pass.)

Fail—To be used only in courses attempted but not passed by special examinations. (Failures in proficiency examinations are not reported.)

GRADE CORRECTIONS

A grade incorrectly reported on the grade card may be changed by the instructor concerned, with the approval of the head of the department in which the course is offered. (The regular Supplemental Grade Report Form must be used.)

GRADE APPEAL

A student who strongly feels that his semester grade in a course is demonstrably improper or that the grading was prejudicial or capricious should first confer promptly with the instructor of the course.

If the student and his instructor are unable to arrive at a mutually agreeable solution, the student has the right to appeal his case. Details of procedure are given in the current edition of *Regulations Applying to All Undergraduate Students.*

GRADE REPORTS

Final course grades are sent automatically to each student.

GENERAL REQUIREMENTS FOR GRADUATION

Undergraduate and Professional Degrees and Certificates Offered at the Urbana-Champaign Campus

Bachelor's Degree

Degrees are conferred at Urbana-Champaign four times each year—February, June, August, and October. Each candidate for a bachelor's degree must meet the general requirements of the University with respect to registration, residence, physical education, general education sequences, and rhetoric; must pass in the subjects which are prescribed

in his curriculum; must conform to the directions of that curriculum in regard to electives and the total number of hours required for graduation; and must meet the minimum scholarship requirements which the University has approved for his college or division.

UNDERGRADUATE COLLEGES	SEMESTER HOURS REQUIRED[1]	MAXIMUM ADVANCED MILITARY ACCEPTED
COLLEGE OF AGRICULTURE		No maximum
Bachelor of Science (B.S.) in		
Agriculture	126[2]	
Food Industry	130[2]	
Food Science	130[2]	
Forestry	136[2]	
Home Economics	120[2]	
Home Economics Education	126[2]	
Ornamental Horticulture	130[2]	
Restaurant Management	126[2]	
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION		6 hours
Bachelor of Science (B.S.) in		
Accountancy	124	
Business Administration	124	
Economics	124	
Finance	124	
COLLEGE OF COMMUNICATIONS		No maximum
Bachelor of Science (B.S.) in Communications	124	
COLLEGE OF EDUCATION		No maximum
Bachelor of Science (B.S.) in		
Business Education	126	
Early Childhood Education	124	
Education of the Deaf	124	
Education of Mentally Handicapped Children	124	
Elementary Education	124	
Industrial Education	128	
Secondary Education	120	
COLLEGE OF ENGINEERING		0 to 6 hours
Bachelor of Science (B.S.) in		(depending on
Aeronautical and Astronautical Engineering	136	curriculum)
Agricultural Engineering	130	
Ceramic Engineering	135	
Civil Engineering	131	
Electrical Engineering	136	
Electrical Engineering and Computer Science	136	
Engineering Mechanics	130	
Engineering Physics	130	
General Engineering	136	
Industrial Engineering	137	
Mechanical Engineering	137	
Metallurgical Engineering	136	
Teaching of Engineering Technology	136	

COLLEGE OF FINE AND APPLIED ARTS		6 hours
Bachelor of Architecture (B.Arch.)	157	
(For students who began an architectural program before September, 1969.)		
Bachelor of Arts (A.B.) in		
Teaching of Dance	130	
Bachelor of Fine Arts (B.F.A.) in		
Art Education	130	
Crafts	122	
Dance	130	
Graphic Design	122	
History of Art	122	
Industrial Design	122	
Painting	122	
Sculpture	122	
Theatre	128	
Bachelor of Landscape Architecture (B.L.A.)	132	
Bachelor of Music (B.Mus.)	130	
Bachelor of Science (B.S.) in		
Architectural Studies	124	
(For students beginning architectural study as freshmen in September, 1969, and thereafter.)		
Music Education	130	
Bachelor of Urban Planning (B.U.P.)	132	
COLLEGE OF LIBERAL ARTS AND SCIENCES		No maximum (included in total of 24 hours maximum electives outside College of Liberal Arts and Sciences)
Bachelor of Arts (A.B.) in		
Home Economics	120	
Liberal Arts and Sciences	120	
Speech and Hearing Science	124	
Teaching of English	128	
Teaching of French	120	
Teaching of German	120	
Teaching of Latin	120	
Teaching of Russian	123	
Teaching of Social Studies	120	
Teaching of Spanish	123	
Teaching of Speech	128	
Bachelor of Science (B.S.) in		
Chemical Engineering	130	
Chemistry	130	
Geology	130	
Home Economics	120	
Liberal Arts and Sciences	120	
Physics	126	
Speech and Hearing Science	128	
Teaching of Biology	120	
Teaching of Chemistry	125	
Teaching of Earth Science	125	
Teaching of Geography	123	
Teaching of Mathematics	120	
Teaching of Physics	126	
COLLEGE OF PHYSICAL EDUCATION		No maximum
Bachelor of Science (B.S.) in		
Health and Safety Education	130[2,3]	

Physical Education	132[2,3]	
Recreation	132[2,3]	

PROFESSIONAL COLLEGES

COLLEGE OF LAW		0 hours
Graduate-Professional		
Juris Doctor (J.D.)	90[4]	
Graduate[5]		0 hours
Master of Laws (LL.M.)		
Master of Comparative Law (M.C.L.)		
Doctor of the Science of Law (J.S.D.)		
COLLEGE OF VETERINARY MEDICINE		
Undergraduate		No maximum
Bachelor of Science (B.S.) in Veterinary Medicine	78[6]	
Graduate-Professional		0 hours
Doctor of Veterinary Medicine (D.V.M.)	77[7]	
Graduate[5]		0 hours
Master of Science (M.S.) in Veterinary Medical Science		
Doctor of Philosophy (Ph.D.) in Veterinary Medical Science		

Certificates

Certificates of Completion are conferred at Urbana-Champaign upon completion of certain specialized curricula. Each candidate for a certificate must meet the general requirements of the University with respect to registration; must pass in the subjects which are prescribed in his curriculum; must satisfy the minimum scholarship requirements which the University has approved for his curriculum; and must complete all special requirements established for his curriculum.

UNDERGRADUATE	SEMESTER HOURS REQUIRED[1]	MAXIMUM ADVANCED MILITARY ACCEPTED
INSTITUTE OF AVIATION		0 hours
Certificate of Completion of		
Curriculum in Aviation Electronics	56	
Curriculum in Aircraft Maintenance	61	
Curriculum for Professional Pilots	60	

POSTGRADUATE

COLLEGE OF ENGINEERING	
Certificate in Teaching of Engineering Technology	32[8]

NOTES

[1] Excluding physical education and basic military, unless otherwise indicated.
[2] Including basic military.
[3] Including specified physical education courses.
[4] In law courses only, beyond the preprofessional study.
[5] Consult the Graduate College catalog for complete information concerning graduate degrees.

[6] In veterinary medicine courses only, beyond the preprofessional study.
[7] Beyond the B.S. in Veterinary Medicine.
[8] In four summers beyond the baccalaureate degree.

Residence Requirement

In addition to specific courses and scholastic average requirements, each candidate for a bachelor's degree from the University at Urbana-Champaign must spend either the first three years, earning not less than ninety semester hours, or the last year (two semesters, or the equivalent), earning not less than thirty semester hours, in residence on the Urbana-Champaign campus, uninterrupted by any work in another institution. Only those courses which are applicable toward the degree sought may be counted in satisfying the above minimum requirements. (Either three twelve-week terms or four eight-week sessions are the equivalent of two semesters.)

Concurrent attendance at the University of Illinois and another collegiate institution does not interrupt University of Illinois residence for graduation.

Credit earned by Advanced Placement is included in the first ninety semester hours and is not considered as interrupting residence.

Credits earned through participation in Committee on Institutional Cooperation (CIC) programs, the Year Abroad Programs in France for Students of French, the one-semester Program for Study in Europe for Students in Architecture, and other foreign study programs for which students are registered in Urbana-Champaign campus courses are counted as University of Illinois residence work.

Students transferring from the Chicago Circle campus to Urbana-Champaign as candidates for degrees must satisfy the residence and academic requirements for graduation established for the curriculum entered on the Urbana-Champaign campus. Since the two campuses do not have identical academic programs, the student who is contemplating a transfer should consult with the college office on the campus to which he expects to transfer.

A maximum of ten semester hours of credit in religious education may, at the discretion of the dean of the student's college, be counted in the total hours required for graduation. Courses of study offered by the religious foundations located in Urbana-Champaign which have been approved (see page 90) are included in this total, but grades earned in these courses are not included in the student's all-University scholastic average, and the courses are not considered as interrupting residence or counted toward satisfying minimum residence requirements for graduation.

Transfers from junior colleges must, after attaining junior standing, earn at the University of Illinois or any other approved four-year institution at least sixty semester hours acceptable toward their degree, in addition to meeting the usual residence requirement for a degree from the University of Illinois. (See page 55.)

A student who requests that the residence requirement for graduation be waived should complete and submit a petition to the dean of his college who indicates his recommendation on the petition and forwards it to the Vice Chancellor for Academic Affairs for final decision.

Scholastic Average

Examinations are conducted by the faculty at the end of each semester, term, and session. All final grades, including failures, in those courses which are acceptable toward graduation in the college in which the student is registered, except the grades earned in the basic instructional program of physical education (courses numbered below 150), courses taken under the pass-fail option (see page 79), courses passed or failed by proficiency or special examination, and courses taken in the religious foundations located in Urbana-Champaign, are used in computing the graduation average. Where a course has been repeated, both the original and subsequent grades are included, but the credit is counted only once.

MINIMUM SCHOLARSHIP REQUIREMENTS FOR A DEGREE

a. All candidates for a degree must have at least a 3.0 ("C") average on all University of Illinois credits counted for graduation requirements and at least a 3.0 average on the combined transfer and University of Illinois credits counted for graduation requirements, calculated as indicated above. Certain colleges have established higher scholastic graduation requirements for specific curricula. Grades earned in courses taken at the other campuses of the University are treated as transferred credit in calculation of scholastic averages.

b. Where a course has been repeated, both the original and subsequent grades are included in the average if the course is acceptable toward graduation, but the credit is counted only once. An original failing grade is not removed for a course subsequently passed by special examination.

c. A student at the Urbana Champaign campus who does not meet the requirements of (a) and (b) above may graduate if he has the minimum grade-point average calculated by either of the following alternate methods:
   1. Exclude courses in which grades of "D" or "E" have been recorded, not to exceed a total of ten semester hours completed prior to the last thirty hours of work completed at the University of Illinois at Urbana-Champaign, and counted for graduation requirements, *or*
   2. A grade average of no less than 3.1 for the last sixty semester hours of work counted for graduation requirements and completed at the University of Illinois at Urbana-Champaign, except in those curricula where a higher scholastic graduation requirement is specified.

Each college office, on request, informs the student regarding the scholarship requirements of that college.

Subject Requirements

PHYSICAL EDUCATION

Men and women entering any branch of the University for the first time with less than sixty semester hours of credit are required to secure four semesters (or the equivalent) of credit in physical education including the amount transferred. It is expected that the student will complete this requirement within the first four semesters of attendance. It is recommended that one of the four semesters should be earned in Physical Education for Men 100 or Physical Education for Women 100.

Credit in these four semesters of required physical education is not included in the total hours or in the scholastic average required for graduation. Those entering with sixty or more semester hours are exempt from the requirement in physical education.

ENGLISH

Satisfactory proficiency in the use of written English is a requirement for all undergraduate degrees awarded by the Urbana-Champaign campus of the University. In order to assure such proficiency, each undergraduate student must earn credit for Rhetoric 101 and 102, or Rhetoric 101 and 108, or Speech 111 and 112, or other equivalent courses, Literature courses are not accepted as equivalent.

Students may satisfy all or part of the English requirement for graduation through successful performance on the Rhetoric Placement and Proficiency Examination. This examination is offered to all new students at various times in the spring and summer during the period of the pre-college programs and during the New Student Program just prior to opening of the fall and spring semesters. By arrangement with the Department of English, other students also may take this examination.

ENGLISH REQUIREMENTS FOR TRANSFER STUDENTS

Persons who enter from another collegiate institution with three or more semester

hours but less than 4.6 semester hours of credit in freshman rhetoric must obtain credit for whichever course is missing unless the Office of Admissions and Records indicates on the student's record that he has been exempted without credit from the equivalent of one or both of these courses.

ENGLISH REQUIREMENTS FOR FOREIGN STUDENTS

Foreign students for whom English is a native language, American students of foreign background, including those from Puerto Rico and Hawaii, displaced persons and other immigrant students who have permanent visas and who plan to remain in this country follow the same English programs as native students. They may take courses offered in the English for Foreign Students program only upon the recommendation of the Chairman of Freshman Rhetoric and only on a remedial basis preparatory to enrollment in Rhetoric 101 and 102 or 108.

The English requirement for graduation for all undergraduate students classified as foreign according to the definitions on page 33 who do not have a degree from a college or university where the native language is English and where all instruction was in English, is determined on the basis of admission and placement tests. These tests include the following:

1. The Test of English as a Foreign Language (TOEFL), administered by the Princeton Testing and Advising Center, Princeton, New Jersey. A satisfactory score on this test must be received by the University before the student may receive a permit to enter the University. (In cases where TOEFL testing dates are not available prior to the desired term of entry, the test given by the English Language Institute, Testing and Certification Division, Ann Arbor, Michigan, may be substituted.)

2. A combination oral and written proficiency and placement test given to those foreign students whose performance on the English entrance test satisfied admission requirements but indicated further study of English necessary for successful college study. The results of this test determine whether (1) the student is to be exempt from one or both of the courses usually required of foreign students (Rhetoric 114 and 115) or (2) he must be assigned to one or more of the non-credit remedial courses which precede registration in the required credit courses.

A passing grade in Rhetoric 114 and 115, or the equivalent, satisfies the graduation requirement for foreign students. Those foreign students whose deficiency in command of English is such that they are placed in the noncredit courses Rhetoric 109 and 110, or 111, are not allowed to register for a full academic program in other fields. Bilingual foreign students who speak English, and who prefer to take Rhetoric 101 and 102, are permitted to enroll in those courses if their achievement on the placement test indicates that they are capable of doing the work.

Transfer students from abroad whose native language is not English and who enter with fewer than 4.6 semester hours of credit in freshman rhetoric must take the placement test for foreign students. Their accomplishment on the placement test determines what additional rhetoric they are required to take.

FOREIGN LANGUAGE

In a beginning course in a foreign language, no credit is accepted toward graduation for the first semester unless the second semester or a more advanced course is passed. Credit in University courses taken to remove high school entrance deficiencies is not counted in the total hours required for graduation, but may, at the discretion of the dean of the student's college, be accepted in partial or complete satisfaction of the foreign language requirement for the degree. (See also statement concerning foreign language placement and proficiency test on page 68 and the statement of the five optional methods for satisfying the language requirement for graduation in Liberal Arts and Sciences in the College of Liberal Arts and Sciences *Student Handbook*.

GENERAL EDUCATION

Effective for all undergraduate students entering the University on or after June 1, 1964, a minimum of six hours each in the humanities, the social sciences, and the natural sciences, will be required for graduation in all curricula. Approved sequences of courses should be distributed over at least three years. Upon request, the individual colleges will provide the student with a list of courses acceptable in his curriculum for this purpose.

Thesis

If a thesis is to be submitted in partial fulfillment of the requirements for a bachelor's degree, the subject must be announced by the end of the sixth week of instruction in the first semester of the student's senior year. The completed thesis on regulation paper must be presented to the dean of the proper college. The work must be done under the direction of a professor in the department concerned and must be in the line of the curriculum from which the degree is expected. A maximum of ten hours of credit in thesis work may be counted toward a bachelor's degree.

Correspondence and Extramural Study

A limited amount of credit in correspondence and extramural study, as explained on page 81, may be counted toward graduation in some colleges.

Second Bachelor's Degree

A student who has received one bachelor's degree may receive a second bachelor's degree, provided that all specified requirements for both degrees are fully met, and provided also that the curriculum offered for the second degree includes at least thirty semester hours not counted for the first degree.

The second bachelor's degree may be earned either concurrently with or subsequent to the first degree.

Candidates for a second bachelor's degree from the University of Illinois must meet the same residence requirements as for the first degree. If any of the first three years of credit has been transferred from another institution, the student must spend the last year (two semesters, or the equivalent) earning a minimum of thirty semester hours in uninterrupted residence on the Urbana-Campaign campus.

Only those courses which are acceptable toward the degree sought may be counted in satisfying the above minimum requirements. This includes the thirty additional hours required for the second degree.

ACADEMIC HONORS

Recognition for superior academic achievement at the University of Illinois is given both by the University and by the student's own college and department.

Graduation with Honors

Each college, with the approval of the Urbana-Champaign Faculty Senate and the Board of Trustees, prescribes the conditions under which candidates for its degrees may

be recommended for graduation with honors. Detailed information concerning the requirements for graduation with honors is included in the sections of this catalog applying to the individual colleges and departments. These distinctions are noted on the student's baccalaureate diploma, on his permanent University record, on official transcripts of his credits, and in the commencement program. Students who have earned honors at graduation have a distinct competitive advantage when applying for graduate fellowships and other awards, and in obtaining good professional positions.

Honors Day Recognition

In the spring of each year, the University holds a convocation of students and members of the faculty, with an address by a distinguished speaker, to give public recognition to its superior students. The printed program is designated the *Honors Day Book* and contains the names of all students receiving University recognition, as well as the names of the current recipients of prizes and awards for undergraduates.

Students whose names are listed in the *Honors Day Book* as receiving University recognition are those who have been on the Dean's list (see below) of their college for all semesters in which they were enrolled in the University since the last Honors Day Convocation. "Honors Day Recognition (year)" is recorded on the student's official University record.

UNIVERSITY HONORS PROGRAMS

Successful performance for one year as an Edmund J. James Scholar is recognized by the University Honors Council, Urbana. This recognition is made by an appropriate typographical sign beside the student's name in the *Honors Day Book,* and is recorded on the student's University record as "Edmund J. James Scholar (year)" This program is described on page 77.

UNIVERSITY HONORS: THE BRONZE TABLET

Sustained academic achievement is recognized by inscribing the student's name on the Bronze Tablet which hangs on a wall of the main library. To be eligible, a student must:

1. Have at least a 4.5 cumulative grade average for all work taken at the University through the semester prior to his graduation, excluding grades earned in the basic instructional program of physical education (courses numbered below 150).
2. Rank, on the basis of his cumulative average, in the top three per cent of the students in his college who will graduate when he does.

If the student is a transfer, he must:

1. Have earned forty or more semester hours at the University of Illinois prior to the semester of his graduation.
2. Have a University of Illinois cumulative average *and* a total cumulative average as high as the lowest one listed for eligible students in his college who have completed all of their work at the University of Illinois.

THE DEAN'S LIST

The name of every eligible student who has achieved a grade average of 4.0 or higher for a given semester is placed on a list prepared for the dean of his college. This list is publicized within the University and is sent to the Office of Public Information for distribution to news agencies throughout the state. Names of James Scholars are preceded by an ampersand (&).

To be eligible for Dean's List recognition, a student must complete successfully *fourteen academic hours* excluding basic instruction courses in physical education (courses numbered 100–149), credits earned through proficiency examinations, and credits earned through Advanced Placement tests. Course work taken on a Pass-Fail or S/U basis will be counted toward the fourteen hours required only if a passing grade is received. Courses for which grades are officially excused or deferred may be included in the fourteen minimum hours upon the successful completion of such course or courses.

Prizes and Awards

Competitive prizes, scholarships, fellowships, and miscellaneous awards, which are offered to students in the University, are listed according to the colleges or departments conducting the competitions.

GENERAL COMPETITIONS

Alpha Lambda Delta Prize. The national organization of Alpha Lambda Delta, honor society for freshman women, gives a book each year to the Alpha Lambda Delta senior woman who achieves the highest scholastic average for seven semesters at the University of Illinois. Certificates of award are given to the senior women maintaining the Alpha Lambda Delta average for seven semesters.

National Alpha Lambda Delta annually awards six $2,000 fellowships for graduate study to recent Alpha Lambda Delta graduates. The recipients are selected by National Council of Alpha Lambda Delta. All pertinent data and completed applications must be received by the National Vice-President of Alpha Lambda Delta by January 1 (approximate). For more information, contact the Dean of Student Personnel Office.

H. R. Brahana Prize. A fund has been established in the University of Illinois Foundation in acknowledgement of the contributions to the University and to the Department of Mathematics by H. R. Brahana, Professor of Mathematics, Emeritus. Income from the fund is used each October to award a prize of $100 to an undergraduate within one year of a bachelor's degree in recognition of outstanding performance in mathematics. The recipient is selected by the Department of Mathematics.

Bryan Prize. In 1898, William Jennings Bryan gave to the University the sum of $250, from the interest on which a prize of $50 is offered for the best essay on a topic relating to the science of government. The contest is open to all undergraduate students. The essay may not be less than 3,000 nor more than 6,000 words in length, and must be left at the office of the Department of Political Science not later than the second Wednesday in May. It is suggested that the essay be on some phase of American government and that contestants confer with the Department of Political Science as to the selection of a topic. The prize is ordinarily offered every fifth year. It will be offered next in 1972.

Thomas Arkle Clark Prize. The freshman honor society, Phi Eta Sigma, gives each year a prize of $25 to the sophomore member of Phi Eta Sigma who has attained the highest scholastic average for his first three semesters in the University. The prize is awarded as soon as possible after the grades are available for the first semester. In case two men have the same average, other factors are considered, such as extracurricular activities and outside work.

Thacher Howland Guild Memorial Prize. The Department of English offers a prize of $25 for the best play of the year written by an undergraduate student. The award may be withheld in any year if no production is found worthy of a prize.

George Huff Certficates of Award. The University of Illinois Alumni Association presents annually framed certificates of award for proficiency in scholarship and athletics. Each student earning a varsity letter in any sport and who receives a scholastic average of at least 4.0 for two consecutive semesters is eligible. These awards are presented by a representative of the Alumni Association between halves of the final home basketball game.

Illini Mothers Association Book Award. In recognition of outstanding academic achievements, the Association donates a book or books to the high school library of each first semester freshman achieving a 5.0 average.

Illini Poetry Prize. The Department of English offers a prize of $25 for an award-winning poem or group of poems written by an undergraduate student. The award may be withheld in any year if no production is found worthy of a prize.

Intercollegiate Conference Medal. The Intercollegiate Conference, through its faculty representative at each conference institution, awards annually a medal to the student in the graduating class who has attained the greatest proficiency in athletics and in scholastic work.

Phi Kappa Phi Awards. The local chapter of Phi Kappa Phi, national all-university scholastic honor society, gives two annual awards of $200, one to a junior and one to a senior member of the local chapter. The students are selected on the basis of ability, character, and need. Applications should be addressed to the local secretary of the society early in the second semester.

Phi Kappa Phi (Sparks Memorial) Fellowships. Four fellowships of $2,500 each, for graduate study in any American institution of recognized standing are awarded annually by Phi Kappa Phi, national all-university scholastic honor society, in competitions open to members of the society in any American college or university where a chapter of the society exists. The recipients are selected by a national board from candidates recommended by the local chapters. Prospective candidates should file their applications with the local secretary of the society early in the second semester.

Thrift Essay Prize. The income from a fund established in 1918 by the committee for the sale of War Savings Stamps in Illinois is available for prizes for essays on thrift. Any student in the University who has had a course in the principles of economics is eligible to compete. The essays deal with some aspect of thrift, as designated by the chairman of the Department of Economics, who is in charge of the contest and who announces the conditions of the contest.

Leah Fullenwider Trelease Memorial Award. Three prizes are awarded for the best short stories submitted to the Department of English by undergraduate students. Funds are derived from gifts of friends of the late Leah Fullenwider Trelease.

COLLEGE OF AGRICULTURE

Alpha Zeta Award. Each year the name of the freshman in the College of Agriculture who makes the highest grade average for both semesters is inscribed on the Alpha Zeta plaque in the Agriculture Library.

Wilbur H. Coultas Memorial Award. Income from a fund established in memory of the late Wilbur H. Coultas, a graduate of the College of Agriculture in the Class of 1923, is awarded as a prize to an outstanding graduating senior in the College of Agriculture. The name of the winner is inscribed on a memorial plaque in the Agriculture Library.

C. J. Elliott Memorial Award. Income from a fund established in memory of the late C. J. Elliott, a graduate of the College of Agriculture in the Class of 1912, is awarded as a prize to an outstanding senior in the College of Agriculture.

Forest Products Research Society Outstanding Student Award. Each year the Midwest Section of FPRS presents a one-year membership to two seniors, one junior, and one junior or sophomore in the wood technology and utilization curriculum who have excelled in scholarship and show superior professional attributes.

Gamma Sigma Delta Prize. Each year the senior in the College of Agriculture who ranks highest in scholarship, on the basis of a minimum of four semesters of work in residence in the University, has his name inscribed on the Gamma Sigma Delta plaque in Mumford Hall.

Home Economics Club Award. Each year the name of the freshman in home economics who makes the highest grade average is engraved on a plaque provided by the Home Economics Club.

National Block and Bridle Merit Trophy Award. A plaque is presented annually to the outstanding senior in the animal science major, based on scholarship and student activities.

Omicron Nu Plaque. Each year the name of the senior in home economics who ranks highest in scholarship is inscribed on the Omicron Nu plaque which hangs in Bevier Hall.

Society of American Foresters Outstanding Senior Award. The Central States Section, SAF, annually awards a one-year membership and an official Society tie pin to the senior in the forest production curriculum who has excelled scholastically and shows superior promise professionally.

Xi Sigma Pi Outstanding Freshman Award. The forestry student with the highest scholastic record receives a double-bitted cruiser's ax with an engraved brass plate on the helve from Alpha Alpha chapter.

DEPARTMENT OF AIR FORCE AEROSPACE STUDIES

Air Force Association Award. A medal is presented to the outstanding senior cadet in the Air Force R.O.T.C.

American Legion Awards. The Illinois Department of the American Legion awards a medal to the freshman, sophomore, junior, and senior cadet with the highest military theory average for the current school year.

American Legion Auxiliary Awards. The Illinois Department of the American Legion Auxiliary makes an award of $50 to the retiring Air Force R.O.T.C. Cadet Commander.

Unit No. 24 of Champaign presents a $10 award to the best-drilled second-year Air Force cadet.

Unit No. 71 of Urbana presents a $25 bond to the most outstanding First Sergeant of the Air Force R.O.T.C. Cadet Wing.

Armed Forces Communications and Electronics Association Award. A gold medal is awarded to the outstanding senior in the Air Force R.O.T.C. enrolled in the electrical engineering curriculum and majoring in communications or electronics engineering.

Chi Gamma Iota Award. Alpha chapter of Chi Gamma Iota, national veteran's scholastic honorary society, annually makes an award to the outstanding R.O.T.C. junior student of all military services on the basis of excellence in scholarship, both academic and military.

Daughters of the American Revolution Award. The Daughters of the American Revolution presents a ring to the outstanding Squadron Commander for the year.

Daughters of Union Veterans of the Civil War Award. The Department of Illinois, Daughters of Union Veterans of the Civil War, presents a medal to the sophomore with the highest military grade average.

Reserve Officers' Association Medal. The Cook County chapter annually awards a medal to the outstanding third-year student. Selection is based upon excellence in scholarship and achievement in leadership.

Sons of the American Revolution Award. The Illinois Society of the Sons of the American Revolution presents a medal to the basic corps cadet maintaining the best military appearance and bearing throughout the year.

University Gold Medal. The Trustees annually provide a gold medal to be awarded to the cadet selected to be Air Force Wing Commander for the coming year.

Veterans of Foreign Wars of the United States Award. The Illinois Department of the Veterans of Foreign Wars of the United States awards a watch, a silver citizenship medal, and a certificate of merit to the outstanding Group Commander.

Veterans of Foreign Wars of the United States Auxiliary Award. A medal and a $25

bond are awarded to the member of the Arnold Air Society Squadron who has made the most valuable contributions to the successful operation of the organization.

Woman's Relief Corps Tablet. The names of the senior cadets of the Air Force, Army, and Navy R.O.T.C. who have excelled in scholarship are inscribed on a bronze tablet.

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

Alpha Kappa Psi Scholarship Medallion. Epsilon chapter of Alpha Kappa Psi, a professional fraternity in commerce, awards annually a scholarship medallion and $25 to a male student pursuing a curriculum in the College of Commerce and Business Administration. The recipient must be a student in the senior class who has completed three full years of academic work in the college; his scholastic average for the first six semesters in the college must be at least 4.5; he must be active in various campus organizations as evidenced by recommendations from the faculty advisers of the respective activities; he must possess qualities of leadership as demonstrated by offices held in the various organizations and by successful completion of beneficial projects under his responsibility; he must have commendable personality as judged by a commerce faculty board appointed by the local chapter of Alpha Kappa Psi to administer the award. The name of the winner is engraved on a scholarship tablet on display in David Kinley Hall.

Delta Sigma Pi Key. The Illinois chapter of Delta Sigma Pi, professional fraternity, annually awards a key to the male student graduating from the College of Commerce and Business Administration with the highest four-year scholastic average.

Haskins and Sells Foundation Award. The Haskins and Sells Foundation has established an annual award of $500 for a junior student majoring in accounting who is selected by a committee of the faculty on the basis of demonstrated excellence in accounting.

COLLEGE OF COMMUNICATIONS

Donald E. Brown Award. An award of $320 sponsored by the Illinois News Broadcasters Association is given every third year to an outstanding student in radio-television news reporting.

Communications Alumni Memorial Award. An award of $100 to an outstanding student in the College of Communications for scholarship, character, and professional achievement as demonstrated during his junior year.

Dudley McAllister Memorial Award. An award of $100 is made annually to the student in the College of Communications giving evidence of the most promise in the reporting of public affairs.

Harold Gustave Roettger Memorial Award. An award is made annually to an outstanding graduating senior in Communications who is a member of the journalism honorary fraternity, Kappa Tau Alpha. The award, based on academic record, may be given to a man or a woman.

St. Louis Advertising Club Award. Two outstanding students in the advertising program each year, one man and one woman, are selected for an award by the St. Louis Advertising Club. The students so honored are chosen on the basis of scholarship, advertising aptitude, and citizenship.

Raymond O. Torr Memorial Award. An award of $100 is given to a student in journalism.

COLLEGE OF EDUCATION

Kappa Delta Pi Award. Alpha chapter of Kappa Delta Pi offers annually an award in the form of a prepaid life membership in the society to an outstanding senior in the College of Education. The award is granted to a student of high character who has

exhibited unusual proficiency in student teaching and who has attained superior scholarship in his field of specialization and high scholarship in all his University work. The name of the recipient is engraved on a plaque hung in the office of the Dean of the College of Education.

COLLEGE OF ENGINEERING

Air Conditioning, Refrigeration, and Heating Award. The Air Conditioning, Heating and Ventilating Magazine awards the Handbook of Air Conditioning, Heating, and Ventilating to a senior who has displayed outstanding interest and proficiency in the area of environmental control. The selection is made by the faculty, and the recipient's name is placed on a plaque located in the Mechanical Engineering Building, and a certificate is given to each winner.

American Institute of Aeronautics and Astronautics Awards. A two-year technical membership in the American Institute of Aeronautics and Astronautics is awarded to the graduating aeronautical and astronautical engineering senior with the highest scholastic average, and a two-year technical membership in the Institute is awarded to the graduating aeronautical and astronautical engineering senior for the best seminar paper delivered before the student organization. The winner of the latter is determined by the vote of the organization.

American Institute of Industrial Engineers Award. The Land of Lincoln chapter (Senior chapter) of the American Institute of Industrial Engineers awards a check for $100 in alternate years to the outstanding senior or junior industrial engineering student. Selection of the recipient is based on the recommendation of the faculty and the liaison senior member. Scholastic standing, acting membership in the student chapter of the American Institute of Industrial Engineers, and other extracurricular activities are considered by judges in making this award.

American Institute of Mining and Metallurgical Engineers' Student Technical Paper Writing Contest. Competition is open to all student associates of the Institute, both undergraduate and graduate. The Chicago Section offers cash prizes of $100 and $50, and books, for the best papers among colleges in this section. The best papers from local sections throughout the country are judged for national prizes.

American Society of Agricultural Engineers Honor Awards. Honor Award Keys of the American Society of Agricultural Engineers are given to the junior and senior students in the professional curricula who are members of the student branch and who have demonstrated high scholastic ability while participating in professional societies, student government, and other organizations. One award may be granted for each twenty-five members of the student branch society.

American Society of Agricultural Engineers (Chicago Chapter) Honored Member Scholarship Award. An award of $200 is made annually in the name of an honored member of the Chicago chapter of the American Society of Agricultural Engineers to a sophomore or junior student enrolled in agricultural engineering. The winner's name and the name of the honored member are engraved on a plaque located in the Agricultural Engineering Building. The student to receive the award is chosen by the honored member and the executive committee of the Chicago chapter from a slate of three students submitted by the Department of Agricultural Engineering Awards Committee. The basis of the award is financial need, extracurricular activities, excellence of scholarship, and character. No student may receive the award more than once.

American Society of Civil Engineers Awards. The awards consist of dues for the first year for associate membership in the American Society of Civil Engineers, an associate member's badge, and a certificate. The Central Illinois Section presents awards in April to three graduating civil engineering students selected from the graduating classes of February, June, and August of the current year. The Illinois Section presents awards in May to two graduating civil engineering students selected from the same graduating classes. Students are selected who have attained high scholarship and who have been active in promoting the affairs of the student chapter at the University.

American Society of Mechanical Engineers Prizes. This Society offers annually five prizes of $10 to $50 for the best papers prepared by senior student members of the Society as judged in regional competitions. This Society also offers annually five prizes of $25 to $200 to the students preparing the best papers on a selected topic in a nationally conducted competition.

The student branch of the Society awards a merit certificate to a student for outstanding service to the Society and also to all students participating in the regional competition.

Ira O. Baker Prizes. Dr. Ira O. Baker, late Professor of Civil Engineering and Head of the Department, 1878–1915, endowed two prizes for the two top-ranking senior students in civil engineering. These awards, presented each spring and amounting to $100 and $50, respectively, are based primarily on excellence of scholarship and secondarily on personal qualities and professional activity. The names of the winners in each year are placed on a bronze tablet located near the office of the Department of Civil Engineering, and a special certificate is given to each winner.

M. T. Dural Undergraduate Research Prize. This prize of $100 is awarded to an undergraduate student in the Department of Civil Engineering who is judged to have prepared the outstanding research report or project for Civil Engineering 297, Special Problems, Civil Engineering 299, Thesis, or for some other departmental research program. Imagination and creativity are given consideration in making the award, as well as the general quality of the project and the contribution of the student in completing the study. The prize was endowed by the family of the late Melih T. Dural, a 1957 graduate in civil engineering.

Eta Kappa Nu Award. The University of Illinois chapter (Alpha) of Eta Kappa Nu, national honorary fraternity, selects and recognizes the most outstanding senior electrical engineer each year. The selectee's name is engraved on a wall plaque for permanent display in the Electrical Engineering Building, and he is awarded an engineering handbook.

Edward S. Fraser Award. A fund has been established in the University of Illinois Foundation by Edward S. Fraser, Civil Engineering, Class of 1939. The income from this fund is used for an annual award of $100 to an outstanding graduating senior in general engineering. The award is based on high scholarship and participation in University activities. The names of the winners each year are placed on a bronze plaque located in the Transportation Building, and an inscribed plaque is given to each winner.

General Engineering Project Design Award. This award was established by the Department of General Engineering in 1969. Gifts from faculty and alumni of the department provide funds to make an award of $25 and a certificate to each member of the design team in the senior course General Engineering 242, Project Design, whose design project has been judged by the department design faculty to be the most outstanding in each calendar year. In selecting the winning project, the judges recognize outstanding excellence in the development of a creative solution for a complex original engineering problem. The award is presented at the annual student-faculty spring banquet. The names of the winners are inscribed on a plaque that is located in the General Engineering Design Room in the Transportation Building.

Hamilton Watch Company Award. An engraved Hamilton watch is presented annually by the Hamilton Watch Company to the senior in engineering who has most successfully combined proficiency in his major field of study with notable achievements in the social sciences and humanities.

Randolph P. Hoelscher Award. This award was established by the Department of General Engineering in 1968 to honor Randolph P. Hoelscher, Professor of General Engineering and Head of the Department from 1918 to 1959, by gifts from faculty and alumni of the department. The award, consisting of a certificate and $75, is presented each spring to the outstanding junior general engineering student in recognition of scholarship, leadership promise, activities, including Illinois Society of General Engineers, and

cultural development. The names of the winners each year are placed on a plaque located in the Transportation Building.

Honeywell Award. The aim of this award is to recognize and reward distinguished individual performance and leadership in engineering at the undergraduate level. The selection may be for unusual ability in one or more areas such as an outstanding technical paper, laboratory project, significant accomplishment in a technical or professional society, or for scholarship. The student selected each year has his name and year inscribed on a bronze plaque and receives a check for $200 and a sterling silver tray with engraving similar to the plaque.

Institute of Electrical and Electronics Engineers Award. The Institute of Electrical and Electronics Engineers makes an annual award to an outstanding senior in electrical engineering. The award is based on activities in the Institute's student branch, student papers, original work, and scholarship. The award consists of a certificate provided by the Institute of Electrical and Electronics Engineers Headquarters and signed by the president of the Institute, together with a nontransferable voucher which when presented with the student's application for transfer entitles the recipient to his first year's dues as Associate Member or Member.

Harvey H. Jordon Award. A fund has been established in the University of Illinois Foundation to honor Harvey H. Jordon who served many years as Professor and Associate Dean of the College of Engineering. The income from this fund is used for an award for an outstanding senior in the College of Engineering. The selection is based on high scholastic standing and character.

E. W. Lehmann Award. This award was established to honor E. W. Lehmann, Professor of Agricultural Engineering and Head of the Department, 1921–1955. The award of $50 to $75 is presented each spring to a student in agricultural engineering, and is based on excellence of scholarship, personal qualities, and professional activity.

O. A. Leutwiler Award. In honor of O. A. Leutwiler, Professor of Mechanical Engineering and Head of the Department, 1934–1945, funds have been made available for an annual award of $50 to a senior student in mechanical or industrial engineering. The award is based on scholarship, personal qualities, and professional and cultural activities. The names of the winners each year are placed on a plaque located in the Mechanical Engineering Building, and a certificate is given to each winner.

Machinery Award. The *Machinery* magazine awards a machinery handbook and a subscription to *Machinery* magazine to a senior who has displayed outstanding interest and proficiency in the area of machine design. The selection is made by the machine design faculty. The recipient's name is placed on a plaque located in the Mechanical Engineering Building, and he is given a certificate.

H. L. Marcus-L. B. Phillips Award. This award has been established by Michael Phillips, General Engineering, Class of 1963, and his wife, Judith Ann (Marcus) Phillips, in honor of their fathers who, like other fathers, have been the inspiration of their sons and daughters throughout their college years. A prize award of $100 is given annually to an outstanding senior in general engineering in recognition of scholarship, character, and activities. The names of the winners each year are placed on a bronze plaque located in the Transportation Building, and an inscribed plaque is given each winner.

Morrow Award. The Morrow Award, honoring the sophomore civil engineering student with the highest scholastic average, is presented each spring by the University of Illinois chapter (Alpha) of Chi Epsilon, national honorary civil engineering fraternity. The recipient's name is engraved on a wall plaque for permanent display in the Civil Engineering Student Lounge in Engineering Hall. He is presented with an engineering handbook. The award is named for the late Frank M. Morrow, Class of 1935, president of Chi Epsilon during his senior year.

Mueller Company Award. This award has been established by the Mueller Company of Decatur, Illinois, to honor an outstanding junior in mechanical engineering. The award, which consists of a check for $100 and a certificate, is based on scholarship, per-

sonal qualities, and professional and cultural activities. The names of the winners each year are inscribed on a plaque located in the Mechanical Engineering Building.

W. E. O'Neil Civil Engineering Fellowship Award. The W. E. O'Neil Civil Engineering Fellowship Award is presented each spring in memory of the late W. E. O'Neil of Chicago who was the founder of the construction company bearing his name. The purpose of the award is to interest and encourage students in civil engineering, and particularly those specializing in construction management. It is presented to a junior, a senior, or a graduate student, and consists of a certificate and $500.

Stanley H. Pierce Award. In honor of the late Stanley H. Pierce, associate dean of the College of Engineering and faculty member for thirty years, this annual award has been established to promote closer relations between students and faculty in the college. The student Engineering Council selects the student who has done the most to develop empathetic student-faculty cooperation. The name of the recipient is inscribed on a plaque in Engineering Hall, and he receives a check and a silver bowl suitably inscribed.

Pi Tau Sigma Award. The University of Illinois Alpha chapter of Pi Tau Sigma, national mechanical engineering honorary fraternity, selects and recognizes the most outstanding sophomore in mechanical engineering each year. The recipient's name is placed on a plaque located in the Mechanical Engineering Building, and he is awarded an engineering handbook and a certificate.

W. H. Rayner Surveying Award. This award was established in 1960 to honor William H. Rayner, Professor of Civil Engineering, Emeritus, by gifts of money from the Society of Professional Land Surveyors and the Illinois Registered Land Surveyors Association. The award, consisting of a certificate and $30, is presented each spring to a student in civil engineering who has completed the required courses in surveying and has demonstrated an interest in surveying by enrollment in elective courses, by employment part time during the school year or during summers, or by the preparation of technical papers dealing with surveying. Over-all scholarship and grades in the surveying courses are also considered in the selection of the winner.

Ernest A. Reid Open House Award. An award of $25.00 and a suitable certificate is presented to the electrical engineering student who creates the best new Engineering Open House display each year. Funds for this award are derived from income from the original Electrical Engineering Show assets and the Ernest A. Reid Memorial Fund.

Lisle Abbott Rose Memorial Award. Friends of Lisle Abbott Rose, former editor in the Engineering Experiment Station and Director of Public Information for the College of Engineering, have established a fund in his memory from which an award of approximately $100 is made annually to recognize a senior student in engineering who most nearly approaches the ideal of technical excellence combined with cultural breadth, depth, and sensitivity. In addition, the recipient is given a small individual plaque and his name is added to the permanent memorial which hangs in Engineering Hall in front of the Engineering Library.

Fred B. Seely Award. In honor of Fred B. Seely, Professor of Theoretical and Applied Mechanics, Emeritus, and Head of the Department, 1934–1952, funds have been established for an annual award of $100 to a senior student in engineering mechanics. The award is based on scholarship, personal qualities, and professional and cultural activities. The names of the winners in each year are placed on a bronze plaque located in Talbot Laboratory, and a certificate of award is given to each winner.

Sigma Tau Honor Freshman Award. Each spring, a sophomore who distinguished himself as a freshman in his academic pursuits, extracurricular activities, and service to the University community is honored by Theta Chapter of Sigma Tau, National Engineering Honors Society, at their spring banquet; and his name is inscribed on a plaque in Engineering Hall.

Tau Beta Pi Fellowships. Five fellowships of approximately $1,500 each, for graduate study in any engineering college of recognized standing, are awarded annually by Tau Beta Pi, national engineering honor society, in competition open to members of the

organization in any American college or university where a chapter of Tau Beta Pi exists. The recipients are selected by a national board from candidates recommended by the local chapters. Prospective candidates should file their applications with the chairman of the board prior to March 1.

Tau Beta Pi Outstanding Freshman Award. The University of Illinois chapter (Alpha) of Tau Beta Pi, national engineering honor society, awards a prize each fall to the sophomore engineering student with the most outstanding freshman record. The award is based on scholastic average in the freshman year, character, and professional promise. The prize is an engraved slide rule or text of the student's choice.

A. L. Thomas Award. This award is presented each spring to the junior in civil engineering having the highest academic average for the third, fourth, and fifth semesters of work completed at the University of Illinois. This award was endowed by Alfred Benesch and Associates, Consulting Engineers, Chicago, Illinois, in memory of their late partner, A. L. Thomas. The award consists of a certificate and $35.

C. C. Wiley Traveling Award. In honor of C. C. Wiley, Professor of Highway Engineering, Emeritus, who has been prominent in the development of highway and traffic engineering for almost half a century, the General Paving Foundation, Champaign, Illinois, provides funds for an annual award of $1,200 to a senior student in highway engineering. The award, made each spring, is used by the winner for travel in the United States during the summer following graduation to study and report upon highway transportation problems in the various states visited. The award is based upon the excellence of a design project in the senior highway design course, scholastic standing, personal characteristics, and demonstrated interest and ability to profit from the travel.

COLLEGE OF FINE AND APPLIED ARTS

Allerton American Traveling Scholarship. Income from an endowment by the late Robert Allerton provides funds for the Department of Architecture to award two scholarships of $500 each to be used for summer travel and study on the Atlantic seaboard by two junior in the history of architecture. The awards are made to those whose accomplishments indicate superior ability in this area.

Alpha Rho Chi Medal. Alpha Rho Chi, national architectural fraternity, provides a bronze medal each year to the Department of Architecture to be awarded to a senior who has shown ability for leadership and given promise of professional merit.

Alschuler Award. This ward is presented annually to the student in the Department of Architecture who is judged to have contributed the best article to the Department publication, *Objective*, during the year.

American Institute of Architects Prizes. The American Institute of Architects awards annually a medal and a certificate to the senior in architecture who is adjudged outstanding in scholastic achievement, character, and promise of professional ability, and a certificate to the senior in architecture who is ranked second in these categories.

American Society of Landscape Architects' Certificate. A certificate of merit is awarded each year to a graduating senior in each school accredited by the American Society of Landscape Architects. In nominating candidates for this award, the faculty considers scholarship, character, ability, and attainment.

Bradley and Bradley Award. An award of $100, offered each semester by the architectural firm of Bradley and Bradley, Rockford, Illinois, is made to a student who has demonstrated exceptional ability in the course Architecture 337.

Deeter-Ritchey-Sippel Award—Fontainebleau. This award of $1,000 is offered annually by the architectural firm of Deeter-Ritchey-Sippel, Pittsburgh, Pennsylvania, to defray tuition expenses and travel to and from Fontainebleau, France.

Edward C. Earl Prizes. Income from an endowment bequeathed by Edward C. Earl is used for undergraduate prizes in various levels of architectural design and architectural

theory, freehand drawing, structural theory and design, working drawings, and for a special prize for summer experience.

Fields, Goldman, and Magee Scholarship. An annual award of $300 is presented to an undergraduate student in architecture who has excelled in design, has completed his fourth year, and has attained general academic excellence.

Gargoyle Awards. Gargoyle Society annually recognizes two freshmen in architecture who rank highest scholastically. Names of these students are permanently inscribed on the Gargoyle plaque.

Kate Neal Kinley Memorial Fellowship. This fellowship, designed to promote advanced study in the fine arts, was established in memory of the wife of a former president of the University and in recognition of her influence in promoting these and similar interests. This fellowship is awarded annually to enable a graduate of the University, or some similar institution of equal educational standing, to pursue advanced study for one year at home or abroad. This fellowship is not open to students of architectural construction, urban planning, or landscape architecture.

Karl Baptiste Lohmann Award. Presented annually to a graduating senior in urban and regional planning in recognition of performance as a student and professional promise. The award is named for Karl B. Lohmann, Professor of City and Regional Planning, Emeritus, who provided the leadership in professional education in city planning at the University of Illinois for more than thirty years. A certificate is given to the recipient.

Kivett and Myers Traveling Fellowship. This award of $1,000 is offered annually by the architectural firm of Kivett and Myers, Kansas City, Missouri, to enable an undergraduate student to participate in the Overseas Study Program of the department.

Frank S. and Jennie M. Long Traveling Scholarship. Income from a bequest provides $600 each for two traveling scholarships for summer travel and study. The scholarships are awarded on the basis of ability, character, and professional promise to architecture students who will return for at least one semester following receipt of the award and prior to graduation.

Mary C. McLellan Scholarship. Established by request of Mary C. McLellan of the Class of 1888, this scholarship is awarded every second year under the direction of the Department of Art. It is open to graduates of the University of Illinois who have demonstrated unusual excellence in one of the areas of study offered by the Department of Art and who have shown promise of professional success. The stipend is to be used for professional development through travel in America or abroad, or for study at a recognized institution or with a qualified private master.

Motorola Incorporated Award. An annual grant of $1,000 to the Department of Industrial Design for distribution to undergraduate students on the basis of scholarship or design ability. The number and amount of the awards are determined by the Department of Industrial Design.

Mu Phi Epsilon Alumnae Award. An annual award of $50 is given to the senior member of Epsilon Xi chapter who has made the greatest contribution in service and scholarship in music. If there is no qualified senior, a junior may be chosen.

Ralph E. Myers Award. This award of $1,000 is offered annually by the architectural firm of Kivett and Myers, Kansas City, Missouri, to enable an undergraduate student to participate in the Overseas Study Program of the department.

Pi Kappa Lambda Award. The initiation fees of Pi Kappa Lambda, national honorary music fraternity, are awarded annually by Zeta chapter to the senior student in music who has the highest scholastic average.

Plym Fellowships. An annual fellowship of $5,000 is awarded in either option for six months study abroad. A third fellowship is given for graduate study in architecture with a stipend of $2,500.

Plym Prizes. Through endowments of Francis J. Plym, the Department of Architecture offers annually certain prizes for undergraduate work. The prizes in architectural

engineering represent three awards to those senior architectural engineers whose work, attitude, and ability are judged the highest. The prize for summer sketches is awarded to the student who, during the summer vacation, makes the most interesting and best freehand sketches. The prize for sketch problems is offered to stimulate better development of sketch problems during the year.

Ricker Prizes. Gold keys are awarded annually for the two best essays on some phase of the history of architecture by students registered in the second year of work in this subject. The prizes are given by Anthemios chapter of Alpha Rho Chi in recognition of the distinguished contributions made by Dr. Nathan Clifford Ricker, who for fifty years taught the history of architecture in the University.

Edward L. Ryerson Traveling Fellowship. One fellowship open to senior architecture students and one fellowship in landscape architecture open to senior and graduate students are offered each year. Each fellowship grants a stipend of $3,000 to be used for a period of approved study abroad of not less than six months' duration.

Scarab Medals. Scarab architectural fraternity offers bronze medals annually for distinguished achievement in the lower junior and upper junior courses in architectural design and the junior course in site planning and housing.

Sigma Alpha Iota Award. The Urbana-Champaign alumni chapter of Sigma Alpha Iota, national honorary music sorority, provides an annual award of $100 given on the basis of musicianship, scholarship, and financial need. All undergraduate students in the School of Music who have completed at least two semesters of work are eligible to apply. The final selection is based upon auditions held once each year.

James M. White Memorial Prizes. Income from the James M. White Memorial Fund is used for prizes in the undergraduate courses in materials and methods of construction, structural elements and theory, and for excellence in graduate studies.

Yasuo Kuniyoshi Memorial Scholarship. Awarded for a full summer session at the Skowhegan School of Painting and Sculpture, Skowhegan, Maine, this scholarship covers board, room and tuition. Created in memory of the painter Yasuo Kuniyoshi, this award is made annually by the Skowhegan School to a student majoring in painting or sculpture at the University of Illinois who shows unusual promise as an artist and whose financial situation is such that he or she could not otherwise attend the Skowhegan School.

COLLEGE OF LAW

Frederick Green Moot-Court Competition Awards. The Horner chapter of Nu Beta Epsilon, law fraternity, has presented to the University a gold cup on which is inscribed each year the name of the student in the College of Law who places first in the Frederick Green Moot-Court Competition.

Harker Prizes. In 1934, Judge O. A. Harker, who for a period of fourteen years was Dean of the College, endowed annual prizes to the senior law student making the highest average grade in law subjects during his entire course and to the junior law student making the highest average grade in all law subjects taken up to the end of his junior year. This fund was augmented in memory of Judge Harker by his son, O. A. Harker, Jr.

Outstanding Service Award. The law student who makes the most valuable contribution to the extracurricular program of the College of Law each year is selected by a specially designated faculty-student committee and awarded the Outstanding Service Plaque. Competition for this award, established by Delta Theta Phi, law fraternity, is open to all law students.

Phi Delta Phi Scholarship Award. An award of $100 is granted each fall to the member of the legal fraternity Phi Delta Phi in the second year class who has attained the highest scholastic average during his first year.

Waterman Prizes. Mrs. Henry Waterman has established an annual prize of $150 in memory of her husband, Henry Waterman, who for many years practiced law in Illinois. From this sum awards are made to the winners of the Moot-Court Competition.

COLLEGE OF LIBERAL ARTS AND SCIENCES

Elliott Ritchie Alexander Award. A book of the student's choice, with inscription of that student's name on a trophy which is on permanent display, is awarded each year to the student in chemistry or chemical engineering who in his first two years at the University has attained the highest scholastic average.

Alpha Chi Sigma Plaque. Zeta chapter of Alpha Chi Sigma, chemical professional fraternity, each year recognizes the freshman man who attains the highest scholastic average for his first semester of work in the curriculum in chemistry or chemical engineering. The selectee's name is engraved on a plaque displayed in the Chemistry Library.

American Institute of Chemical Engineers Award. This award, which includes a certificate, a two-year subscription to the *A.I.Ch.E. Journal,* and a pin, is presented to the chemical engineering student who has attained the highest grade-point average during his freshman and sophomore years.

American Institute of Chemists Award. Two certificates are awarded by the Chicago chapter of the American Institute of Chemists each year to the graduating seniors in chemistry and chemical engineering who are most outstanding in scholarship, personal integrity, and leadership.

Martha Belle Barrett Prizes in History. Two awards of $100 each are made annually. One goes to the student with the highest grade average in history and the other is awarded to the senior who writes the best honors thesis under the supervision of a member of the Department of History. The winners of the awards are selected by the Department of History.

Chemical Rubber Company Achievement Award. A copy of the *Handbook of Chemistry and Physics* is presented each year to the outstanding student in freshman chemistry.

Dante Prize. The Dante Society of America offers an annual prize of $100 for the best essay on a subject related to the life or works of Dante written by a student in any college or university in America, or by anyone who has graduated from such a college or university within the last three years. Essays may be left at the office of the Department of Spanish, Italian, and Portuguese, or sent to the Dante Society of America, Widener Library, Harvard University, Cambridge, Massachusetts. They must reach the Society by May 1. Inquiries concerning this prize may be made at the department office or sent to the Dante Society.

Donald W. Doerscher Memorial Award. This award is made annually to the senior in the College of Liberal Arts and Sciences who has consistently done the most outstanding work in the field of philosophy. The winner of this award is selected by the Department of Philosophy, or a faculty committee acting for the department.

Reynold Clayton Fuson Award. A substantial award is given to the student in chemistry or chemical engineering, who, through the first semester of his senior year, has made the most outstanding academic improvement.

Geology Alumni Association Senior Award. A Brunton compass is awarded each year to the graduating senior in geology who is most outstanding in scholarship.

Algernon Dewaters Gorman Prize. This prize is awarded at the June Commencement every third year to the student in chemistry or chemical engineering with junior standing who has the highest grade-point average, provided he has earned not less than twenty-five hours credit in chemistry or chemical engineering. The average is based on all courses taken on this campus exclusive of physical education and military.

Iota Sigma Pi Prize. A cash prize of $20 is awarded each year by the honorary chemical sorority, Iota Sigma Pi, to the woman in the senior class who has the highest scholastic average in her University work with chemistry as her major subject.

Mimi Jehle Award. An annual cash prize is presented each year to the outstanding student completing the curriculum for the degree of Bachelor of Arts in the Teaching

of German. Selection is made on the basis of over-all scholastic average and performance in the Educational Practice course.

Kendall Award. A monetary award is given each year to a student in chemistry or chemical engineering who is a member of Phi Lambda Upsilon and shows the greatest promise in his chosen field.

Agnes Sloan Larson Award. Substantial monetary awards are given at the beginning of the sophomore year to students in chemistry or chemical engineering who compiled the most outstanding records as freshmen.

Werner Marx Award. A book prize is given annually to an undergraduate who has demonstrated excellence and creativity in the study of German language and literature.

Merck Award. Two copies of the *Merck Index* are presented each year, one to an outstanding senior in the chemistry curriculum and one to an outstanding senior in the chemical engineering curriculum.

Omega Beta Pi Scholarship Award and Trophy. A cash prize of $25 is awarded each year by the honorary premedical fraternity, Omega Beta Pi, to the student who has shown the highest excellence in the physical sciences during this first three semesters in the premedical curriculum. Omega Beta Pi also awards a trophy at the end of the first semester each year to the freshman premedical student making the highest scholastic average.

Phi Beta Kappa Scholarship. The University of Illinois chapter of Phi Beta Kappa awards a scholarship of $100 annually to a member of the junior class of the College of Liberal Arts and Sciences, selected on the basis of general merit. The scholarship is available to the winner during his senior year at the University of Illinois.

Phi Lambda Upsilon Cup. Alpha chapter of Phi Lambda Upsilon, honorary chemical society, awards a cup annually to the sophomore man who has the highest scholastic average among the students in the curricula of chemistry and chemical engineering. The cup is on display in the main hall of the Chemistry Annex.

Phi Sigma Medal. The national organization of Phi Sigma, honorary biological society, awards annually a silver medal to the undergraduate student presenting the best report or evidence of the most original research on a biological subject.

Psi Chi Award. A cash prize of $100 is awarded each year by Psi Chi, the psychology honorary society, for outstanding undergraduate research in psychology.

Worth Huff Rodebush Award. A substantial monetary award is given in the second semester each year to the most able senior who has demonstrated his intention to make a career of chemistry or chemical engineering.

DEPARTMENT OF MILITARY SCIENCE

American Legion Medals. The American Legion annually awards medals for military and scholastic excellence to the two advance course cadets.

American Legion Auxiliary Awards. The Illinois Department of the American Legion makes an award of $50 to the retiring Army Brigade Executive Officer.

Unit No. 24 awards $10 to the cadet placing second in the Hazelton Medal competition.

Unit No. 1 presents an award of $25 to the second-year cadet who demonstrates military aptitude and personal development.

The Nineteenth District presents an award of $25 to the winner of the Hazelton Medal Competition.

Armed Forces Communications and Electronics Association Award. A gold medal and certificate are awarded to the outstanding senior in Army R.O.T.C. majoring in electronic engineering.

Association of the United States Army. The Association annually presents a medal and certificate to the outstanding advance course cadet.

Chicago Tribune Awards. The *Chicago Tribune* awards a gold and silver medal to two outstanding freshmen and sophomores. The presentation of these medals is based on military achievement, scholastic attainment, and character.

Chi Gamma Iota Award. Alpha chapter of Chi Gamma Iota, a national veteran's scholastic honorary society, annually presents a watch to the junior R.O.T.C. student with the highest military and scholastic average.

Daughters of the American Revolution Prize. A camera is presented to an advance course cadet demonstrating outstanding leadership and scholastic achievement.

Hazelton Medal. In 1890 Captain W. C. Hazelton provided a medal which is awarded to the best-drilled freshman in the basic course. Each competitor must have been in attendance at the University at least sixteen weeks of the current college year and have not had more than one unexcused absence from drill. To be eligible for this award, a student must have a grade of "B" in military science and he must have an academic average of not lower than "B" in his first semester courses. Competition is normally held in March.

National Defense Transportation Association Award. The Association awards annually the N.D.T.A. medal to the twenty most outstanding senior cadets enrolled in educational areas of particular interest to the Transportation Corps. The competition is conducted on a national basis and requires the nomination of the Professor of Military Science and Dean of the student's college.

Phalanx Awards. Phalanx, a tri-service military fraternity, presents an award to the outstanding second-year cadet or midshipman in each service.

Reserve Officers' Association Medal. The Department of Illinois annually presents a medal to the outstanding first-year advance course cadet based on excellence in scholarship and achievement in leadership.

Superior Cadet Decoration Award. The Department of the Army annually awards a medal, pendant, and ribbon to the outstanding freshman, sophomore, junior and senior cadets.

Union Veterans of the Civil War Auxiliary Award. The Auxiliary to the Union Veterans of the Civil War annually awards a saber to the advance course cadet demonstrating exceptional ability in advanced military operations.

University Gold Medal. The Board of Trustees annually provides a gold medal to be awarded to the retiring Brigade Commander.

Veterans of Foreign Wars of the United States Auxiliary Award. A medal and a $25 government bond are awarded to the outstanding Army sophomore in Pershing Rifles.

Veterans of Foreign Wars of the United States Award. A watch, medal, and certificate are presented to the outstanding Battalion Commander of the Army R.O.T.C. and a medal and certificate are presented to the outstanding company commander for demonstrated leadership and academic achievement.

Woman's Relief Corps Award. The Illinois Department of the Woman's Relief Corps, an auxiliary to the Grand Army of the Republic, presents an award to the outstanding senior R.O.T.C. student of the three services for excellence in military scholarship.

Clair M. Worthy Military Science Award. The Clair M. Worthy award is presented to a senior for outstanding military leadership. The recipient must rank academically in the upper fourth of his military science class.

DEPARTMENT OF NAVAL SCIENCE

American Legion Auxiliary, Department of Illinois Award. To the N.R.O.T.C. Company of the Company which won the Color Company Competition.

American Legion, Department of Illinois Medals. To the two midshipmen of the sophomore class and the two midshipmen of the freshman class, N.R.O.T.C. who have achieved the highest grade-point average for three semesters of Naval Science and for Naval Orientation, respectively.

American Legion Auxiliary, Unit 24, Champaign Award. To the midshipman who, by his interest and zeal in extracurricular activities within the Naval Battalion, was chosen to be President of the Trident Naval Honorary Society, $10.00 are given.

American Legion Auxiliary, Unit 71, Urbana Award. To the midshipman of the N.R.O.T.C. Rifle Team who has achieved the highest shooting average for the academic year, a $25.00 bond is given.

Chi Gamma Iota Award. Alpha chapter of Chi Gamma Iota, national veteran's scholastic honorary society, annually makes an award to the outstanding R.O.T.C. junior student in any branch of the service with the highest academic and military average.

Chicago Tribune Awards. Three gold medals and three silver medals are presented by the *Chicago Tribune* to outstanding N.R.O.T.C. midshipmen. The awards are based on military achievement, scholastic attainment, and character.

Daughters of the American Revolution Award. To the midshipman of the N.R.O.T.C. who, by demonstration of outstanding qualities of Naval Leadership, was chosen to command the N.R.O.T.C. Battalion for the academic year.

Daughters of Founders and Patriots of America Award. The Illinois Department of the national society awards a medal to the midshipman who has achieved the highest academic proficiency for one semester in the University.

Daughters of the Union Veterans of the Civil War Award. The Department presents a medal to the N.R.O.T.C. student who, through leadership and academic proficiency, has achieved the position of the outstanding midshipman in the Marine option program.

General Dynamics N.R.O.T.C. Award. A plaque is awarded to the midshipman of the senior class, N.R.O.T.C., who has excelled in the course of naval engineering.

Hazelton Medal. In 1890 Captain W. C. Hazelton provided a medal which is awarded to the best-drilled freshman in the basic course. Each competitor must have been in attendance at the University at least sixteen weeks of the current college year.

Commander Maurice L. Horner, Jr., Memorial Award. A substantial monetary award is presented to the outstanding third-year contract midshipman, based on aptitude for naval service, naval science grades, other academic grades, and leadership. This award is administered by Illinois Commandery Foundation, Naval Order of the United States. This award is the most beneficial award offered midshipmen.

Illinois Society of the Sons of the American Revolution Award. To the retiring Battalion Adjutant of the N.R.O.T.C.

Dr. Edward C. Khuen Award. In memory of the late Dr. Edward C. Khuen, the Chicago Veterinary Medical Association established in 1968 a $100 award to be given annually to a fourth-year veterinary medical student proficient in small animal medicine.

Ladies Auxiliary to Veterans of Foreign Wars, Department of Illinois Award. A medal and $25.00 bond are given to the midshipman contributing most toward the ideals of professional development.

Reserve Officers' Association Medal. The Cook County chapter annually awards a medal to the outstanding third-year advanced course student in each of the three services based upon excellence in scholarship and achievement in leadership.

United States Naval Institute Awards. These awards are presented to the midshipmen with the highest and second highest grade in naval history.

University Gold Medal. The Board of Trustees presents a sword and scabbard to the midshipman of the graduating class who has achieved the highest grade-point average for seven semesters of naval science.

Veterans of Foreign Wars of the United States Award. To the midshipman of the N.R.O.T.C. who, by demonstration of outstanding qualities of naval leadership, was chosen to command the N.R.O.T.C. Battalion for the academic year.

Woman's Relief Corps, Department of Illinois Award. A camera is awarded to the outstanding senior R.O.T.C. student in any branch of service who has excelled in military scholarship.

Woman's Relief Corp Tablet. The Illinois Department of the Woman's Relief Corps presents a tablet to senior cadets and midshipmen of the Army, Navy, and Air Force R.O.T.C. who have excelled in military scholarship.

COLLEGE OF PHYSICAL EDUCATION

Alpha Sigma Nu Key. Each semester, Alpha Sigma Nu, physical education honorary for women, selects junior and senior women with an all-University average of 4.0 or higher who are active participants in and have given outstanding service and leadership to the following activities and organizations: dance concerts, Orchesis, Physical Education Majors Club, Terrapin, and Women's Extramural Sports Association. These students are awarded keys, and their names are inscribed on a plaque in Freer Gymnasium.

Charles K. Brightbill Memorial Award. A cash award and an engraved paperweight are presented annually to a senior in the curriculum in recreation and park administration. The recipient is selected by a faculty committee on the basis of scholarship, personality, leadership, and character.

Delta Theta Epsilon Award. A trophy is awarded annually by Delta Theta Epsilon, honorary physical education fraternity, to a senior in the curriculum in physical education for men. Character, scholarship, personality, and ability as a teacher are considered by the faculty committee when making the award.

C. O. Jackson Award. An annual award by Rho chapter of Phi Epsilon Kappa in honor of Professor Emeritus C. O. Jackson is made to the outstanding senior in physical education for men. The name of the recipient is inscribed on a plaque in Huff Gymnasium.

Phi Epsilon Kappa Key. A key is awarded annually by Phi Epsilon Kappa, the only national honorary fraternity for physical education, to the senior in the curriculum in physical education for men with the highest all-University grade-point average.

COLLEGE OF VETERINARY MEDICINE

Complete information concerning these awards can be obtained in the Office of the Dean of the College of Veterinary Medicine.

William H. Danforth Leadership Training Award. Offered annually, the award covers the cost of a two-week summer program at the American Youth Foundation Leadership Training Camp in Shelby, Michigan. First-year veterinary medical students are eligible.

Dr. Lester E. Fisher Award. Fifty dollars is presented annually for proficiency in small animal clinical medicine by Dr. L. E. Fisher, Director of Lincoln Park Zoological Gardens in Chicago.

Illinois State Veterinary Medical Association Award. An award of $50 is made annually to the fourth-year student with the highest scholastic average for the four-year professional course in veterinary medicine.

Illinois Veterinary Medical Alumni Association Award. This annual award of $25 is presented for proficiency in clinical medicine.

Illinois Veterinary Medical Alumni Association Editorial Awards. Four awards are presented annually. A $50 award and the title of Associate Editor of the *Illinois Veterinarian* magazine are given to each of two third-year students. A $25 award and the title of Assistant Editor of the *Illinois Veterinarian* magazine are given to each of two second-year students.

Dr. Edward C. Khuen Award. In memory of the late Dr. Edward C. Khuen, the Chicago Veterinary Medical Association established in 1968 a $100 award to be given annually to a fourth-year veterinary medical student proficient in small animal medicine. Dr. Khuen, a Chicago veterinarian and Cook County rabies inspector from 1954 to 1968, was influential in promoting the passage of many Illinois laws which affect veterinary medicine and public health.

Omega Tau Sigma Award. By inscribing his or her name on a plaque which is displayed in the college library, this fraternity annually honors a senior student member who has demonstrated high academic and extracurricular achievement. A gift is also presented to this student.

Charles Pfizer and Company Award. A $400 award is made to help defray expenses of a fourth-year veterinary medical student. Recipient is selected in his third year on the basis of merit and financial need.

Dr. Jesse Sampson Award. This $25 award was established in 1965 by the late Dr. Jesse Sampson, Emeritus Professor of Veterinary Physiology and Pharmacology, to recognize a third-year student for scholarship, achievement, and aptitude in physiology.

Upjohn Company Awards. Four annual awards of $50 each for proficiency in clinical medicine. Two fourth-year and two third-year students receive an award each year, one of each class for proficiency in small animal medicine, the other for large animal medicine.

Women's Auxiliary of the American Veterinary Medical Association. An award of $100 is presented to the fourth-year student doing the most to advance the standing of the veterinary medical profession on the University of Illinois campus.

RESERVE OFFICERS' TRAINING CORPS

Army R.O.T.C.

Military training has been given at the University of Illinois since it opened in 1868. This training was initiated under a charter issued by the State of Illinois and in compliance with the federal laws which provided for the establishment of land-grant colleges. The program was further defined by Congressional passage of the National Defense Acts of 1916 and 1920, which established the Reserve Officers' Training Corps offering basic and advanced training on a selective basis. In 1964, Congress passed the R.O.T.C. Vitalization Act which modified the program to the extent that we have it today. Major innovations of this act include a scholarship program which provides financial assistance for specially selected students on a four-year or two-year basis. In 1969, financial assistance scholarship programs were added on a one-year and three-year basis. A special two-year program designed for students with two academic years remaining, but who have not received on-campus instruction in the basic course, is available. Further information on these programs is provided below.

Normal Four-Year Program

ADMISSION REQUIREMENTS

Students enrolling in the *Basic Course* must:

1. Be regularly enrolled on a full-time basis.
2. Be male citizens of the United States at least seventeen years of age.
3. Be able to complete both the basic and advanced program requirements and receive a baccalaureate degree prior to reaching twenty-eight years of age.
4. Be physically fit and of good moral character.
5. Be selected by the Professor of Military Science and the University.

Students enrolling in the *Advanced Course* must:

1. Have completed the basic course requirements through high school R.O.T.C., on-campus instruction, or the special six-week summer camp.
2. Sign a contract, with the consent of their parents or guardian if a minor, to serve for the prescribed period. Currently, this is two years.
3. Agree in writing to accept an appointment, if offered, as a commissioned officer.
4. Be selected by the Professor of Military Science and the University.

CURRICULUM

The *Basic Course* fulfills the necessary requirements for admission to the advanced program of study and consists of the following required courses normally taken during the freshman and sophomore years:

FIRST YEAR — FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
M.S. 100—Leadership Laboratory	0	M.S. 111—U.S. Army and National Security (U.S. Defense Establishment, II)	1
M.S. 101—Introduction to Military Science (U.S. Defense Establishment, I)	1	M.S. 125—Leadership Laboratory	0
Nonmilitary elective[1]	3		
SECOND YEAR			
M.S. 112—American Military History	2	M.S. 102—Map and Aerial Photo Analysis	1
M.S. 150—Leadership Laboratory	0	M.S. 103—Introduction to Tactics	1
		M.S. 175—Leadership Laboratory	0

The *Advanced Course* is a two-year course of instruction including a summer camp of six weeks between the junior and senior years which leads to a commission as a Second Lieutenant in the United States Army. It consists of the following required courses normally taken during the junior and senior years:

THIRD YEAR — FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
M.S. 200—Leadership Laboratory	0	M.S. 202—Introductory Military Operations (Fundamentals and Dynamics of Military Team, I)	3
M.S. 201—Principles of Military Instruction	1	M.S. 225—Leadership Laboratory	0
M.S. 203—Principles of Military Leadership	1		
Nonmilitary elective[1]	3		

FOURTH YEAR

M.S. 212—Advanced Military Operations (Fundamentals and Dynamics of Military Team, II)	3	M.S. 210—Military Law and Administrative Management	1
M.S. 250—Leadership Laboratory	0	M.S. 211—Proseminar	2
Nonmilitary elective[1]	3	M.S. 275—Leadership Laboratory	0

NOTES

[1] A nonmilitary elective approved by the Department of Military Science and the student's college is required during the first, third, and fourth years. Military courses are offered only during semesters as shown above.

BENEFITS FOR ADVANCED COURSE CADETS

1. Commission in either the Regular Army or in the United States Army Reserve.
2. Subsistence pay at the rate of $50 per month during the junior and senior years, and pay during summer camp at the same rate as cadets at the United States Military Academy, plus a travel allowance for the summer camp. When the cadet is called to active duty, a uniform allowance of $300 is authorized.
3. An officer-type uniform is furnished by the University during training and may be kept by the students upon successful completion of the program.
4. Academic credit for Military Science courses is granted according to the regulations of the individual colleges.
5. Deferment from Selective Service.
6. Students who are interested in and qualified for flight training may be selected to undergo such training as provided by the University at the expense of the United States Army.

Scholarship Program

This program is designed to offer financial assistance to outstanding young men in the four-year Army R.O.T.C. program who are interested in the Army as a career. The program provides free tuition, books, laboratory fees, and a subsistence allowance of $50 per month for the period that the scholarship is in effect. Scholarships may be awarded for one, two, three, or four years. Four-year scholarships are open to all students entering Army R.O.T.C. as freshmen. Application is made for this scholarship during the first semester of the senior year in high school. One-year, two-year, and three-year scholarships available only to students who have completed prerequisite basic or advanced course study.

ELIGIBILITY

Any male citizen of the United States who can meet the following criteria is eligible to compete for an Army R.O.T.C. scholarship:

1. Be at least seventeen years of age prior to the date on which the scholarship will become effective.
2. Be able to complete all requirements for a commission and a college degree at not more than twenty-five years of age on June 30 of the year in which he becomes eligible for appointment as an officer.
3. Enlist in the United States Army Reserve for a period of time necessary to complete the requirements for a commission.
4. Agree to complete the requirements for a commission, to accept either a Regular

Army or a Reserve commission, whichever is offered, and to serve on active duty for a period of at least four years after being commissioned.

5. Be physically qualified in accordance with standards set for scholarship students.

6. Be a high school graduate or have received equivalent credit from an acceptable state or national agency.

Applicants for the three-year scholarship, in addition to meeting the eligibility requirements listed below, must:

1. Have at least one academic year of college, or, if enrolled in a five-year baccalaureate degree program, not more than two years at the time of enrollment as a scholarship cadet.

2. Have completed at least one academic year and not more than one and one-half academic years of military science training at the time the award becomes effective. Waivers may be granted to prior servicemen and cadets authorized to receive advance placement.

3. Be able to complete all requirements for a baccalaureate degree in three academic years if enrolled in a four-year program or four academic years if enrolled in a five-year program.

Applicants for two-year scholarships, in addition to meeting the above requirements, must:

1. Satisfactorily complete the "on campus" Army R.O.T.C. Basic Course and be accepted by the Professor of Military Science for enrollment in the Advanced Course.

2. Have at least two years of academic study remaining to qualify for a degree.

Applicants for the one-year scholarship, in addition to meeting the requirements outlined under eligibility above, must have completed the basic program and one year of the advanced program and will be able to complete the requirements for a baccalaureate degree in one year if enrolled in a four-year program or in two years if enrolled in a five-year program.

CRITERIA FOR SELECTION

Selection of students to receive four-year scholarships will be based upon the following requirements. (Application for the four-year scholarship is made during the fall semester of the senior year in high school.)

1. Results of the CEEB Scholastic Aptitude Test.

2. High school academic record.

3. Participation in extracurricular athletic and nonathletic activities.

4. Personal observations.

5. Physical examination.

6. Interviews.

Selection for the one-, two- and three-year scholarships will be based upon:

1. The applicant's college record in both academic and military studies.

2. Personal observations.

3. Such other criteria as the Professor of Military Science may establish.

Two-Year Program

This program is designed specifically to fill the needs of junior college graduates and students of four-year colleges who have not taken Army R.O.T.C. during their first two years. Students with a baccalaureate degree who will have two or more years in graduate school are also eligible to apply for the two year program. A six-week basic summer camp substitutes for the first two years of the four-year program. Except for this substitution, the program is the same.

PREREQUISITES FOR ENROLLMENT

In addition to being a graduate of a junior college, or a student in a four-year college who has completed all requirements through the sophomore year, or a graduate student with two or more years in graduate school, the student must meet the following prerequisites:

1. Be physically and mentally qualified.
2. Be of sound character.
3. Be at least seventeen years of age. Student must not be more than twenty-eight years of age when commissioned.
4. Be recommended by a board of officers.
5. Successfully complete six weeks of summer camp training in lieu of the Basic R.O.T.C. course normally taken as a freshman and sophomore.

STEPS TAKEN TO PARTICIPATE

1. Complete the R.O.T.C. questionnaire. These are available at junior colleges or in the office of the Professor of Military Science, Room 111, Armory, University of Illinois, Champaign, Illinois 61820.
2. Take the R.O.T.C. qualifying examination.
3. Take the medical examination.
4. Attend a personal interview.
5. Attend the basic summer camp.

NOTE: After applying (step 1), student will be notified when and where to complete steps 2 through 5.

FOR FURTHER INFORMATION ON ANY OF THESE PROGRAMS CONTACT:

Professor of Military Science
University of Illinois at Urbana-Champaign
Room 111, Armory
Champaign, Illinois 61820
Phone (217) 333-1550 or 333-3418
or
Assocate Professor of Military Science
University of Illinois at Chicago Circle
P.O. Box 4348
Chicago, Illinois 60680
Phone (312) 663-3451
or
Commanding General
Fifth United States Army

ATTN: ALFAG–ZI
Fort Sheridan, Illinois 60037

Air Force R.O.T.C.

The Air Force R.O.T.C. program at the University of Illinois at Urbana-Champaign offers the opportunity of a professional training program for those college men and women who desire to serve in the United States Air Force as a commissioned officer. The educational experience gained will provide the necessary background to enable the young officer to function effectively in an Air Force career.

General Military Course (GMC)

The basic course in the Air Force R.O.T.C. program is offered to freshmen and sophomores and includes Air Force Aerospace Studies 111, 112, 121, and 122. It is designed to give the students basic information on world military systems and the role of the United States Air Force in the defense of the free world.

Professional Officer Course (POC)

The advanced training during the junior and senior years is a two-year course of instruction and includes Air Force Aerospace Studies 231, 232, 241, and 242. It is designed to develop skills and attitudes vital to the career professional officer. Students enrolled in the Air Force R.O.T.C. program may apply for deferment from Selective Service. Final selection of students rests with the Professor of Air Force Aerospace Studies.

REQUIREMENTS FOR THE PROFESSIONAL OFFICER COURSE

1. Students must have at least two years remaining at the University as an undergraduate and/or graduate student upon entry into the program.
2. Students must pass either a flight physical or a general service-type physical examination.
3. Students must be able to complete all requirements for appointment as an officer in the Air Force prior to reaching twenty-six and a half years of age for flying category and thirty years for nonflying category.
4. Successful completion of a six-week field training unit, held at selected Air Force bases, is a prerequisite for entrance into the two-year Professional Officer Course. A four-week field training unit is a requirement for the four-year course.
5. Students must achieve qualifying scores on the Air Force Officer Qualifying Examination.
6. Students who are qualified and accepted in a category leading to pilot training must agree to participate in, and pursue toward completion, a course of orientation flight training which is provided by the University under contract with and at the expense of the United States Air Force.
7. Students must execute a written statement with the government agreeing to complete the Professional Officer Education Program (contingent upon remaining in school), to attend a summer training unit at the time specified, to accept a reserve commission in the Air Force upon graduation, and to serve four years on active duty after graduation if in a nonflying category, and to serve five years if in a flying category after the pilot or navigation training has been completed. The summer

training units is a concentrated laboratory of Aerospace Studies, the duration of which is twenty-eight days. This twenty-eight day training unit *is not* required of students who elect to attend the six-week summer training unit in lieu of completion of the General Military Education Program.

8. Students must enlist in the Air Force Reserve (ORS) before he or she can become a member of the Professional Officer Education Program. This enlistment is terminated upon acceptance of an Air Force commission.

9. Students must possess and maintain a quality grade-point average at least as high as, but preferably higher than, that required by their college for the award of a baccalaureate degree.

10. Final selection of students rests with the Professor of Aerospace Studies.

BENEFITS AND ALLOWANCES FOR CADETS IN THE PROFESSIONAL OFFICER EDUCATION PROGRAM

1. Commission in either the Regular Air Force or the Air Force Reserve.

2. Deferment from Selective Service.

3. An officer-type uniform is furnished by the University during training which may be kept by the student for use on active duty.

4. A non-taxable subsistence allowance of $50 a month, (a salary) for attendance at the four or six-week summer training unit, plus travel allowance to and from the training.

5. Academic credit up to a maximum of three hours each semester, according to the regulations of each college.

6. Space available travel on military aircraft within the continental United States.

7. Reduced rates for travel on railroads.

A.F.R.O.T.C. College Scholarship Program

FRESHMEN

This program provides scholarships for a limited number of high school students accepted for admission at the University of Illinois. During their participation in Air Force R.O.T.C. they will receive $50 per month subsistence, plus tuition, fees, laboratory expenses, and book allowances.

A. ELIGIBILITY REQUIREMENTS

1. Be a male citizen of the United States.

2. Be at least age seventeen on date of enrollment and under age twenty-five on June 30 of estimated year of commissioning.

3. Have completed or will complete high school during the current academic year. High school students who will not be ready to enter college in the fall semester are not eligible and should not apply.

4. Be medically qualified for acceptance into pilot or navigator training.

5. Have no moral obligations or personal convictions that will prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic.

B. ADDITIONAL REQUIREMENTS FOR APPLICANTS SELECTED AS FINALISTS

1. Be accepted for enrollment at the University of Illinois.
2. Achieve a qualifying score on the Air Force Officer Qualifying Test (AFOQT).
3. Pass a Class I or IA medical examination for flying, administered by an Air Force doctor.
4. Enlist in the Air Force Reserve for a period of eight years or until completion of all commissioning requirements as a second lieutenant in the U.S. Air Force.

C. SUBMISSION OF APPLICATIONS

Those interested should apply directly to Air Force R.O.T.C. (OTTA), Maxwell Air Force Base, Alabama 36112. Applications should be received no later than November 1 of the academic year preceding enrollment for the fall semester of the following year.

SOPHOMORE, JUNIOR, AND SENIOR

This program provides scholarships for a selected number of cadets who are enrolled in Air Force R.O.T.C. During their participation in the program they will receive $50 per month subsistence, plus tuition, fees, laboratory expenses, and book allowances.

A. ELIGIBILITY REQUIREMENTS

1. Be actually enrolled in the Air Force R.O.T.C. four-year program on campus.
2. Achieve a qualifying score on the Air Force Officer Test (AFOQT).
3. Pass either a flight physical or a general service-type physical examination.
4. Meet, and be selected by, a board of Air Force Officers and University representatives.
5. Possess and maintain a quality grade-point average of 3.25.

B. ADDITIONAL REQUIREMENTS FOR APPLICANT SELECTED

1. Execute a written contract with the U.S. Government agreeing to complete the Professional Officer Education Program; to attend a summer training unit at the specified time; to accept a reserve commission in the Air Force upon graduation; and to serve four years on active duty after graduation if in a non-flying category, or five years if in a flying category, after the pilot or navigation training has been completed. The summer training unit is a concentrated laboratory of Aerospace Studies, the duration of which is twenty-eight days.
2. Enlist in the Air Force Reserve for the period of eight years. This enlistment is terminated upon completion of the A.F.R.O.T.C. program and acceptance of an Air Force commission.
3. Students who are qualified and accepted in a category leading to pilot training must also agree to participate in, and pursue, a course of orientation flight training which is provided by the University under contract with and at the expense of the United States Air Force.

Staff and Equipment

Air Force officers are assigned by Headquarters U.S.A.F. as instructors in the Air Force R.O.T.C. unit. The senior officer, as head of the Air Force Unit, is designated as Professor of Aerospace Studies. All other officers hold appropriate subordinate academic and military positions on his staff.

Equipment for instruction is furnished by the Air Force. Many training aids in the form of projectors, films, and other equipment are available.

The Armory at the University of Illinois contains offices, classrooms, and a drill area 400 feet long and 200 feet wide. All classes are held in the Armory.

Further inquiry concerning the Air Force R.O.T.C. program at the University should be directed to the Professor of Aerospace Studies, Air Force R.O.T.C., Room 232, Armory, University of Illinois at Urbana-Champaign, Champaign, Illinois 61820.

Naval R.O.T.C.

The naval R.O.T.C. offers an undergraduate student an opportunity to earn a commission in the United States Navy or United States Marine Corps or in the United States Naval or United States Marine Corps Reserve. A student enrolled in this program pursues his studies as any other University student, except he has certain specific requirements which prepare him for duties as an officer upon graduation. A student may be enrolled in either the Navy College Scholarship Program or the Navy College Program (nonscholarship). Naval Science courses are open to any undergraduate student who meets the course prerequisites even if not enrolled in the two previously mentioned programs.

NAVY COLLEGE SCHOLARSHIP PROGRAM

The Navy College Scholarship Program provides a student with tuition, fees, books, and retainer pay (currently $50.00 per month) for four years. A student enrolled in a degree program which requires longer than four years to complete is permitted to take a leave of absence of a year to finish his baccalaureate degree. Upon graduation a scholarship student is commissioned in the United States Navy or United States Marine Corps and serves four years on active duty. If he then chooses, he may return to civilian life, retaining a commission in the Naval Reserve or Marine Corps Reserve. This reserve commission must be retained until the sixth anniversary of his first commission. A newly commissioned officer who qualifies has the opportunity to continue his education toward an advanced degree.

Each state and territory has quotas of these scholarships for which high school seniors and college freshmen compete each year. Selection is based on the applicant's Scholastic Aptitude Test (SAT) or American College Test (ACT) score, his aptitude for the naval service, and certain physical qualifications.

Scholarship students get an opportunity during the summer to put into practice the things they have learned in the classroom. Three summer training cruises of six weeks each are taken by these students either at sea aboard a United States Navy ship or at a naval air station and amphibious base. Students who choose to enter the United States Marine Corps spend their last summer training period at Marine Corps Officer Candidate School.

NAVY COLLEGE PROGRAM

The Navy College Program is also a four-year curriculum. A student receives retainer pay (currently $50.00 per month) during his junior and senior years. While enrolled he is given a 1-D Selective Service deferment. If his degree program requires longer than four years to complete, he will be permitted up to a year's leave of absence to finish his baccalaureate degree. Upon graduation, the college program student is commissioned in the United States Naval or United States Marine Corps Reserve and serves three of his six-year reserve obligation on active duty. If the newly commissioned officer qualifies, he may continue his studies toward an advanced degree.

A student may apply for admission to the College Program to the Professor of Naval Science, who makes the final selection. This selection is based on mental, physical, and aptitude criteria. A college program student also gets an opportunity for summer

training, usually after his junior year. He will go to sea on a ship of the United States Navy for six weeks or, if he chooses to enter the Marine Corps, will attend Marine Corps Officer Candidate School for six weeks.

REQUIREMENTS

In addition to mental, physical, and aptitude requirements which depend upon the program, an N.R.O.T.C. student must:

1. Be a male citizen of the United States.
2. Have attained his seventeenth birthday on or before June 30 of the year of enrollment and not have passed his twenty-first birthday by that date. If a minor, he must have the consent of his parents.
3. Have no moral obligations or personal convictions that will prevent him from conscientiously bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic.

N.R.O.T.C. students have a two-hour laboratory course, Naval Science 100, each week for which there is no credit and also take the following Naval Science courses.

FIRST YEAR FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
N.S. 111—Principles of Naval Organization and Management	3	N.S. 112—Introduction to Naval Ship Systems	3
SECOND YEAR			
		N.S. 122—American Military Affairs	3
THIRD YEAR (Navy)			
N.S. 231—Naval Operations and Navigation, I	3	N.S. 232—Naval Operations and Navigation, II	3
THIRD YEAR (Marine)			
N.S. 291—Evolution of Warfare	3		
FOURTH YEAR (Navy)			
N.S. 241—Naval Weapons Systems	3	N.S. 242—Naval Leadership	3
FOURTH YEAR (Marine)			
N.S. 293—History of Amphibious Warfare	3		

Each student's degree program must also include the following University courses:

	HOURS
Calculus and/or Statistics	6
Physics, Chemistry, a Biological Science or an Earth Science	6
Computer Science	3
Pol. Sci. 387—National Security Policy	3

Further information regarding the Naval R.O.T.C. may be obtained in person from the office of the Professor of Naval Science, Room 239, Armory, or by writing to the Professor of Naval Science, University of Illinois at Urbana-Champaign, Champaign, Illinois 61820.

Colleges and Schools

COLLEGE OF AGRICULTURE 185
INSTITUTE OF AVIATION 229
COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION 235
COLLEGE OF COMMUNICATIONS 243
URBANA COUNCIL ON TEACHER EDUCATION 251
COLLEGE OF EDUCATION 259
COLLEGE OF ENGINEERING 281
COLLEGE OF FINE AND APPLIED ARTS 321
COLLEGE OF LIBERAL ARTS AND SCIENCES 359
GRADUATE SCHOOL OF LIBRARY SCIENCE 415
COLLEGE OF PHYSICAL EDUCATION 419
JANE ADDAMS GRADUATE SCHOOL OF SOCIAL WORK 439
COLLEGE OF VETERINARY MEDICINE 443

The administrative offices of the College of Agriculture are in Mumford Hall.

College of Agriculture

The College of Agriculture prepares men and women for careers in the broad fields of agriculture and home economics. It offers many courses, which have in common an interest in the production, processing, sale, and use of food, fiber, and clothing materials. Illinois, located in one of the greatest agricultural regions of the world, is in an advantageous position for teaching and research in agriculture and the related industries. While many courses in this college are open to all qualified students in the University, most courses are designed primarily for students who wish to follow a four-year curriculum in agriculture or home economics.

There are several four-year curricula leading to the degree of Bachelor of Science. The curriculum in agricultural science provides a flexible program for students who wish to prepare for graduate study in agricultural fields or for professional work requiring more science, mathematics, or engineering than can be included in the core curriculum in agriculture. It presupposes careful program planning under the supervision of a carefully selected faculty adviser.

The core curriculum in agriculture is broad and flexible, with sufficient electives and majors to meet specific needs. Within this curriculum, students may major in agricultural economics (with options in farm management, agricultural marketing, general agricultural economics, or rural sociology), agricultural mechanization, agronomy (with soils, crops, or agronomy options), animal science, dairy science, general agriculture, horticulture, or vocational agriculture. Graduates from the core curriculum engage in various types of farming, in educational and extension work, in civil or public service, in the marketing of agricultural products, in the sale and service of agricultural equipment and supplies, in agricultural credit work, in plant protection work, and in numerous other activities related to agriculture. Graduates from the curriculum for teachers of agricultural occupations are prepared to teach in the high schools of Illinois and most other states.

The curriculum in agricultural communications prepares students for positions in agricultural writing, editing, advertising, public relations, radio and television broadcasting, and photography.

The curriculum in agricultural industries provides a broad selection of

courses in agricultural sciences, natural sciences, economics and other social sciences, business administration communications, finance and the humanities. It is designed to prepare students for careers in those industries and businesses which serve or are related to agriculture. During the first two years, this curriculum closely parallels the requirements of the core curriculum in agriculture. Students desiring to transfer from one to the other during the first two years may do so with little difficulty.

The curriculum in dairy technology leads to employment in the dairy manufacturing industry or to research or teaching in this field.

The curriculum in ornamental horticulture is intended primarily for students preparing to produce and/or market flower crops, nursery products, and other ornamentals; engage in floricultural service activities; or do teaching and research in this field.

The curriculum in food science is designed for students planning technical or administrative careers in food processing or food marketing.

The curriculum in wood science prepares students to work with wood as a raw material. Graduates are qualified to enter positions which deal with the physical and mechanical properties of wood. They will be concerned with using wood in new and better ways, with the seasoning, manufacturing, purchase, sale, preservative or fire-retarding treatment, gluing, or finishing of wood. The curriculum in forest science prepares students for various activities in the establishment, protection, management, and utilization of timber crops and forested lands. Graduates are qualified for employment by public agencies or in private industry.

The preveterinary curriculum, which may be taken in either the College of Agriculture or the College of Liberal Arts and Sciences, prepares students for admission to the College of Veterinary Medicine.

The curriculum in restaurant management prepares students for managerial positions in restaurants and other commercial food service units. It also gives them basic training for work as purchasing agents, kitchen equipment and layout specialists, food inspectors, and for other allied occupations.

In home economics, the College of Agriculture provides two four-year curricula leading to the degree of Bachelor of Science in Home Economics or in Home Economics Education. Within the home economics curriculum, major programs are provided in apparel design, the child and family, foods and nutrition, foods in business, general home economics, hospital dietetics, household management, institution management, retailing of clothing and home furnishings, and textiles and clothing. Graduates in home economics are engaged in nursery school, elementary school, and high school teaching; as dietitians in hospitals and for school lunch programs, cafeterias, and residence halls; as food service managers in hotels, clubs, and restaurants; in retailing in the textiles, clothing, and home furnishings fields; in food and fabric testing; in work with utility companies; in educational services with food industries; in research in colleges and universities, government agencies, and industry; in extension services; and as nutritionists and consultants with social and public health agencies. Students preparing to teach home economics in high schools should enroll in the curriculum in home economics education.

Combined programs may also be arranged in agriculture and business administration, agriculture and agricultural engineering, agriculture and law, or agriculture and veterinary medicine.

The four-year professional curriculum in agricultural engineering, which is administered by the College of Engineering, includes general and specialized courses offered in the College of Agriculture.

The first two years in each curriculum include the necessary scientific and cultural basis for later specialization. Each student is assisted in arranging his program by a member of the faculty under the organized advisory system of the college. Each new student in agriculture is supplied with a copy of *A Handbook for Agriculture Students and Advisers* which contains instructions on choice of individual objectives and suggestions for educational programs of study appropriate to those objectives. Students in the Department of Home Economics are given the *Home Economics Student Handbook* and a booklet describing home economics student activities.

The instructional program of the College of Agriculture is constantly enriched by close association with the work of the Agricultural Experiment Station and the Cooperative Extension Service in Agriculture and Home Economics. Staff members and students thus have direct contact with current problems in research and practice.

Extramural courses for advanced undergraduate or graduate credit are offered each semester at several locations in the state.

The College of Agriculture does not offer instruction by correspondence courses.

Many specialized short courses, conferences, and special events of interest to rural and urban people, homemakers, and the agricultural industries are available.

REQUIREMENTS FOR ADMISSION

Besides meeting the general admission requirements of the University, students entering the College of Agriculture must have taken prior to entry the subjects prescribed in the chart on page 38. It is highly recommended that prospective students take a full four units of English and one or more additional units of mathematics beyond algebra and plane geometry. At least two and preferably three units of science are desirable (biology, chemistry, and physics). If available, vocational agriculture can be quite useful, particularly for students planning to enter the core curriculum.

Students entering the agricultural science or preveterinary curriculum as freshmen must rank in the upper half of their high school class; those entering as transfers must have a scholastic average in their collegiate work of not less than 3.5 in terms of the grading system of the University of Illinois.

The admission of transfer students to curricula of the college other than agricultural science and preveterinary medicine will follow the general University rules.

REQUIREMENTS FOR GRADUATION

Students who have satisfied the general University requirements for graduation, have maintained throughout their course a satisfactory record of scholarship and moral character, and have completed a curriculum in the College of Agriculture, including the prescribed studies and sufficient electives, are graduated with the degree of Bachelor of Science.

The total credit hour requirements for the various degrees are: in home economics, 120 hours; in home economics education, 126 hours; in ornamental horticulture, 130 hours; in food science, 130 hours; in forest science and wood science, 136 hours; and in

all other agriculture curricula, 126 hours. No credit in physical education courses may be counted in arriving at these totals. (See credit limitations below.) Credits earned in military science may be counted toward graduation in all curricula.

A candidate for graduation must complete all special examinations to remove failures, all proficiency examinations, all excused grades, and all course substitutions by the beginning of the tenth week of his final semester.

Students who have transferred from other educational institutions to the University of Illinois and who are candidates for the degree of Bachelor of Science in an agricultural curriculum are required to complete in residence at least half the technical agriculture credit required for the degree. Transfer students must satisfy University residence requirements.

Each candidate for graduation must have an average of not less than 3.0 including grades in courses transferred from other institutions, and an average of not less than 3.0 in all courses taken at the University of Illinois.

GENERAL EDUCATION SEQUENCES

All College of Agriculture students who entered the University after June 1, 1964, are required to complete sequences of courses in the areas of natural sciences, humanities, and social sciences.

NATURAL SCIENCES

Agriculture students satisfy the natural sciences requirement by completing a curriculum of the college.

HUMANITIES

All students must complete one six-hour sequence from the approved courses within a *departmental sequence;* or an approved *interdepartmental sequence.* Some curricula prescribe certain courses which, if on the approved sequences list, may be used toward completion of this sequence requirement.

Departmental Sequences

Architecture—Six hours from: 211, 212, 310, 311, 312, 313, 314, 315, 316, 317.
Art—Six hours from: 111,* 112,* 115, 116,* 211, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 313, 314, 315, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328.
Classical Civilization—110,* 111,* and 112*; 301 and 302.
English and American Literature—Six hours from any courses except 199, 386, and 387.
Foreign Languages—Six hours from 103,* 104* (or equivalent), or any 200- or 300-level literature courses in foreign languages.
Humanities—151 and 152; 211 and 212; 215 and 216; or 363 and 364.
Music—Six hours from: 113, 115, 130,* 131,* 213, 214, 315, 316.
Philosophy—Six hours from: 101, 102, 105, 110, any 300-level course.
Speech and Theatre—Six hours from 177,* 178,* 361, 362, 366.

Interdepartmental Sequences—Humanities

Architecture 211 or 212, and one course from Art 111,* 112,* or 115.
Architecture 211 or 212, and Classical Civilization 111* and 112.*
Architecture 211 or 212, and Classical Civilization 361 or 362.
Art 111,* 112,* or 115, plus Philosophy 323.
Any three courses from Art 115, 116*; Music 113, 115.
Classical Civilization 111,* and Philosophy 303.
English 102,* 281, 282, or 316; plus Speech 366.
* Courses which are open to freshmen in addition to English 101, 102, 103, 115, and 116.

SOCIAL SCIENCES

1. Each student must complete one six-hour sequence from the following approved courses within a *departmental sequence;* or from an approved *interdepartmental sequence.*

2. A minimum of nine hours of social sciences are required in all curricula of the college, and some curricula require more than nine hours of social sciences.

3. Unless otherwise prescribed, the additional hours of social sciences beyond the sequences may be selected from any course or courses listed under the departmental se-

quences or interdepartmental sequences, *with the further provision that at least one course must be selected from a department other than the one from which the departmental sequence is selected.*

4. Some curricula prescribe certain courses which, if on the approved sequence list, may be used toward completion of this sequence requirement.

Departmental Sequences

Anthropology—Six hours from: 102,* 103,* 220, 240, 250, 260, 320, 330, 331, 332, 348, 352, 358, 360, 361, 362, 363, 366, 367, 368, 369, 381, 382, 383.
Economics—102* and 103,* or 108 and one additional course from: 214, 236, 238, 240, 255, 288, 300, 301, 306, 312, 313, 328, 350, 352, 353, 357, 358, 360.
Geography—Six hours from: 104,* 105,* 210, 223, 323, 362, 366, 369, 381, 382, 383, 386.
History—Six hours from: Any courses for which the student is qualified.
Political Science—Six hours from: Any courses for which the student is qualified.
Psychology—Six hours from: 100* or 103,* 201, 250.
Social Sciences—Six hours from: 201, 202, 292, 301.
Sociology—151* and 152*; or 100* and three hours from any other sociology courses except 184 and 185.

Interdepartmental Sequences—Social Sciences

Economics 108 and Political Science 150 and History 151,* 152,* 261 or 262.
Economics 108 and Psychology 100* or 103* and Sociology 100.*
Economics 108 and Geography 105.*
* Courses which are open to freshmen in addition to History 111, 112, 131, 132, 151, and 152.

CREDIT LIMITATIONS IN CERTAIN COURSES

The following credit limitations apply to all curricula of the College of Agriculture:

1. No credit in typing or shorthand may be counted toward graduation.
2. Those students who entered the College of Agriculture after September 1, 1958, may not count any credits in physical education courses. This restriction does not apply to courses in dance, health education and recreation, or to those students in home economics education who complete an approved minor in physical education. (Students who entered the College of Agriculture prior to September 1, 1958, may count physical education credits in accordance with the rules in effect at the time of their admission.)
3. Credit for courses in religion, up to ten hours, may be counted toward graduation.
4. Not more than ten hours of credit in special problems courses may be counted toward graduation in agriculture and home economics curricula.
5. Not more than two hours of credit in music ensemble courses may be counted toward graduation.

HONORS PROGRAM

Encouragement of superior students has always been an aim of the college. The college participants in the University Honors Program, and has established special honors sections and seminar courses for outstanding students. The Honors Council invites selected freshmen and sophomores to participate. Upperclassmen who have maintained a 4.0 ("B") average are also eligible for participation. These same students are also eligible for honors courses and honors sections offered by other colleges of the University, and for certain other activities and privileges offered to James Scholars.

HONORS AT GRADUATION

Honors awarded to superior students at graduation are designated on the diploma as Honors and High Honors. For the degree with Honors, the student must have an average of 4.2 in all courses used for graduation; for the degree with High Honors, the student must have an average of 4.5 in all courses used for graduation.

DEPARTMENTS AND FACILITIES

The College of Agriculture comprises ten departments which offer courses open to all qualified students in the University. In addition, an orientation course for freshmen,

honors courses for James Scholars and other designated college honor students, an interdepartmental junior-senior seminar, courses in agricultural extension and agricultural journalism, which are not assignable to a particular department, are listed under the title "Agriculture." The departments, their work and equipment, are described in the following paragraphs with reference to the curricula as outlined on subsequent pages.

Agricultural Economics. This department offers courses in farm management; farm appraisals; land economics; agricultural finance, prices, and statistics; marketing agricultural commodities, farm supplies; agricultural policies; economic development (international) and history (American); rural sociology; rural recreation; agricultural law; and farm taxation.

Students majoring in agricultural economics must choose from one of four options (farm management, agricultural marketing, rural sociology, or general agricultural economics) in the core curriculum, or from option II of the agricultural science curriculum. A major consists of twenty hours of agricultural economics or rural sociology.

The farm management option is for students interested in operating farms or in managing farm property for others. There are employment opportunities in farm management organizations, banks, and other businesses that provide professional services in farm management and related areas of work.

The agricultural marketing option is designed to prepare students for employment in the buying and selling, processing, transportation, and distribution of (1) agricultural products, and (2) machinery, fuel, feed, fertilizers, and other production items which are used by farmers.

The general option permits a balanced selection of courses from different areas of specialization; it is designed to serve students especially interested in agricultural policy and economic development.

The rural sociology option is designed to provide training in the general area of human relations and group leadership, with special emphasis on agricultural and rural populations. Students can prepare for effective leadership in the agricultural extension service, in youth and farm organization groups, and in education.

Students who wish to prepare for graduate training will find option II of the agricultural science curriculum especially well-suited for that purpose, though completion of any of the four options in the core curriculum may qualify them for graduate work.

Required and suggested courses for the five options are given in *A Handbook for Agriculture Students and Advisers.*

Agricultural Engineering. Courses in agricultural engineering and agricultural mechanization cover the principles of engineering as applied to agriculture, including problems in the areas of soil and water control, farm buildings and housing, field machinery, tractors, crop processing, and farmstead mechanization. Instruction in farm shop practices and techniques is offered.

The department offers two series of courses: (1) agricultural mechanization courses open to agricultural and other students providing a major in agricultural mechanization, and (2) agricultural engineering courses open only to students in the four-year curriculum in agricultural engineering in the College of Engineering, or in the five-year combined program of agricultural science and engineering.

The agricultural mechanization major prepares students for employment with manufacturers and retailers of farm equipment, farm buildings and materials, or feed and fertilizer, with the electric power industry, with land improvement agencies, with banks, insurance, and farm management companies, or in their own business. The graduate must know his own product or service and be able to coordinate the product or service with the overall program of those with whom he is dealing.

The agricultural engineering series of courses prepares the student for careers in design, development, or testing in industry, private or governmental research, and college teaching. (See page 283.)

Agronomy. The Department of Agronomy offers courses in both crops and soils, and a well-integrated program of study is provided in both fields. Instruction in crops includes courses in breeding, production and evaluation of cereals, corn, and forage crops, crop physiology, design of field experiments, and weeds and their control. Instruction in soils includes courses which deal with the origin and development of soils, land appraisals, soil conservation, soil chemistry, soil physics, soil fertility and fertilizer use, soil management, and soil microbiology. Facilities for instruction in soils and crops include well-equipped laboratories and greenhouses. The Agronomy Farm is also available. Advanced students may use these facilities in both course work and research. A major in agronomy consists of twenty-five hours in agronomy courses. An option may be elected in crops or soils or both.

Students interested in graduate study should select suitable courses by consulting with their advisers, or follow the curriculum in agricultural science. Numerous employment opportunities exist in various agricultural industries for students who wish to major in the agricultural industries curriculum with emphasis in agronomy and with an adviser in agronomy.

Animal Science. The Department of Animal Science offers courses in the areas of animal genetics, physiology, nutrition, ecology, and meat science. Other courses are concerned with the application of scientific principles to the management of swine, beef cattle, sheep, poultry, light horses, and laboratory animals. University herds and flocks of these various species are available for instruction and experimentation. Specialized courses are offered in animal evaluation, animal behavior, artificial insemination, livestock marketing, and world animal agriculture. Students may qualify for graduate study in specialized areas of animal science by selecting suitable sequences of courses under a major in either the animal science or agricultural science curriculum. Those who plan to terminate their study at the B.S. level usually follow a more general program of study in the broad field of animal science. Students who plan a business career in some field related to animal science may wish to major in agricultural industries and choose an adviser from the staff in the Department of Animal Science.

Dairy Science. The courses in dairy science are concerned with the breeding and feeding of dairy cattle, including genetics, nutrition, and physiology; management, sanitation, and judging of dairy cattle; and the biochemical, physiological, and microbiological phases of milk production and utilization. The equipment of this department includes laboratories for dairy microbiology, dairy biochemistry, dairy cattle nutrition, dairy cattle physiology, dairy production, and population genetics. A farm stocked with a herd of more than 500 head of dairy cattle of Holstein-Friesian, Jersey, Guernsey, Brown Swiss, and Ayrshire breeds affords facilities for undergraduate and advance study in the several phases of work listed above.

Food Science. Instruction in food technology, including dairy technology, is conducted in this department. The department is responsible for all courses in food processing except those which have to do with preparation of food in the home. Students majoring in food science are offered two undergraduate curricula, one leading to the degree of Bachelor of Science in Food Science and the other to the degree of Bachelor of Science in Dairy Technology. Graduate study leading to the master's and doctor's degrees is available in both fields. The equipment of this department includes a diversified dairy manufacturing plant with equipment and facilities for making all manufactured dairy products. Pilot plant facilities for the processing and preservation of fruits, vegetables, cereals, meats, and other classes of foods are available. These include modern equipment of commercial types for canning, freezing, dehydrating, cereal milling, vacuum concentrating, and other operations involved in food manufacture. Laboratories for research and teaching in chemistry, microbiology, and engineering as applied to all types of food products and processes are available.

Forestry. There are two four-year curricula in forestry leading to the degree of Bachelor of Science in Forestry. The curriculum in forest science prepares students for all phases of the management of forest properties (private or public, large or small), for the production of valuable wood products or for watershed protection, wildlife habitat, recreational enjoyment, or other benefits. The curriculum in wood science prepares students to work with wood as a basic raw material. Graduates enter positions requiring a sound knowledge of the anatomical, physical, and strength properties of wood. Such tasks may involve (1) effects of moisture on wood use, (2) flow of liquids such as preservatives or fire retardants, into wood, (3) special problems in gluing or finishing wood, and (4) efficient manufacture or sale of wood products. Graduates of both curricula may be employed in industry; by federal, state, or local government; by universities and colleges; or may operate their own business or consulting service. Although registration is in the College of Agriculture, many of the courses of instruction are in the Colleges of Liberal Arts and Sciences and Engineering. The forestry curricula utilize laboratory, drafting, demonstration, and classroom facilities of several departments in each of these colleges as well as those of the College of Agriculture. Specialized equipment in the Department of Forestry includes an infrared gas analyzer, spectrophotometer, gas chromatograph, pressure plate and pressure membrane apparatus for determining soil moisture characteristics, instruments for measuring environmental and climatic factors, a universal testing machine for studying mechanical properties of wood, plywood shear-testing apparatus, a high-pressure cylinder for treating woods with chemicals or preservatives, a dry kiln, and climate chambers. Other facilities include forty acres of forest

and Christmas tree plantations on the campus, several natural woodlands near the campus and at other locations throughout the state, and a summer camp in northern Minnesota. Students who are interested in forestry as a profession may secure a pamphlet describing career opportunities and courses of instruction by writing the Department of Forestry.

The Department is accredited by the Society of American Foresters.

Home Economics. Courses given in this department are planned to adapt principles of arts and science to homemaking and family life and to prepare students for careers in allied professions. Opportunity is given for concentration in the following fields: apparel design, the child and family, foods and nutrition, foods in business, general home economics, hospital dietetics, household management, institution management, retailing of clothing and home furnishings, textiles and clothing, and teacher education. The administrative offices of the department are located in Bevier Hall. This building is equipped with modern facilities for home economics teaching, research, and extension. There are well-designed laboratories and classrooms for food preparation and evaluation, for nutrition research, and for clothing construction, design, and testing. Special facilities are available for the study, selection, and testing of home furnishings and textiles. A model cafeteria and restaurant provide opportunity for study and research in quantity foods and restaurant management.

The Child Development Laboratory, 1105 West Nevada Street, Urbana, provides opportunity for students to observe and participate in the teaching of four groups of preschool children and for infant observation.

Facilities for demonstration and practice in household management are provided in the Home Management House, 1202 West Green Street, Urbana.

Several courses have been especially designed to meet the needs of nonmajor students who desire work in home economics to supplement a profession or for personal needs.

A curriculum in restaurant management, intended for both men and women, is supervised by the Department of Home Economics. In addition to courses covering the general education requirements for all students, the curriculum provides a combination of business and food-service training intended to fit the needs of students planning employment in food-service establishments.

Horticulture. Courses in horticulture provide instruction in pomology, vegetable crops, floriculture and ornamental horticulture, and in subjects common to all these divisions, such as plant propagation, plant genetics, plant anatomy and morphology, and the physiology and ecology of horticultural plants, as well as special problems in experimental horticulture. For instruction in pomology, use is made of the varietal and experimental plantations maintained by the department and of the Horticulture Field Laboratory. This building is equipped with cold storage rooms; constant-temperature chambers; chemical, physiological, histological, and pathology laboratories; and a greenhouse. Facilities for instruction in vegetable crops in the Vegetable Crops Building include a physiological and soil laboratory, plant breeding laboratory, greenhouses, controlled-temperature chambers, and experimental seed-drying equipment. Several acres of land are equipped for irrigation and are available for research on cultural methods and for study on varieties of vegetable crops. The facilities for ornamental horticulture include a Floriculture Building with classrooms; soils, physiology, and genetics laboratory; ten greenhouses; and outdoor gardens and nursery. The greenhouses, used for research and teaching purposes, contain a wide selection of florist crops commonly used in commercial and decorative or conservatory work.

A major in horticulture in the core curriculum in agriculture is designed for students interested primarily in general agriculture who desire a basic knowledge of horticulture. Emphasis is placed on the basic plant sciences giving a general background for the specialized phases of horticulture. The appropriate choice of horticulture courses and electives prepares students for the production of fruits, vegetables, or other specialized horticulture crops.

Those whose major interest is in the production and marketing of flowers, foliage, nursery crops, and turf and grounds management should register in the ornamental horticulture curriculum.

Plant Pathology. The courses offered in the Department of Plant Pathology are designed to prepare students for graduate work in plant pathology and to provide supplementary training for students specializing in related fields such as agronomy, food science, floriculture, and horticulture. Laboratories, greenhouses, and field facilities are available for instruction and research in this field. Students expecting to take graduate work in plant pathology should enroll in the agricultural science curriculum, or the plant protection option in the general agriculture major.

Curriculum in Agricultural Communications

For the Degree of Bachelor of Science in Agriculture

This curriculum is designed for students who wish to pursue careers in the combined fields of agriculture and communications. It seeks to prepare them for work in such careers as agricultural advertising, public relations, farm radio and television broadcasting, photography, and agricultural publications writing or editing. The College of Agriculture and College of Communications offer this curriculum as a joint project. It allows the planning of study programs closely suited to the student's interests in one of three communications options: advertising, news-editorial, or radio-television.

Upon completion of the curriculum requirements and a minimum of 126 hours of credit, exclusive of physical education, the student is awarded the degree of Bachelor of Science in Agriculture.

SAMPLE PROGRAM

FIRST YEAR

FIRST SEMESTER	15 OR 16 HOURS	SECOND SEMESTER	15 OR 16 HOURS
Agr. 100—Agriculture in Modern society[1]	1	Agriculture Core Course	3 or 4
Agriculture Core Course	3	Chem. 101—General Chemistry[4]	4
Bot. 100—General Botany, or Zool. 104—Elementary Zoology	4	Rhet. 102—Rhetoric and Composition[3]	3
Math. 111—Algebra, or Math. 112—College Algebra[2]	5 or 3	Zool. 104—Elementary Zoology, or Bot. 100—General Botany	4
Rhet. 101—Rhetoric and Composition[3]	3	Physical Education	(1)
Physical Education	(1)		

SECOND YEAR

	16 TO 18 HOURS		16 HOURS
Agriculture Core Course	3 or 4	Agriculture Elective[5]	3
Agriculture Elective[5] or Agr. 114—Agricultural Journalism	3	Agr. 114—Agricultural Journalism, or Agriculture Elective	3
Physical Science Course[6]	3 or 4	Econ. 108—Elements of Economics	3
Social Sciences Sequence Course[7]	3	Humanities Sequence Course[8]	3
Speech 101—Principles of Effective Speaking[3]	3	Social Sciences Sequence Course[7]	3
Physical Education	(1)	Physical Education	(1)

THIRD YEAR

	18 OR 19 HOURS		16 TO 19 HOURS
Agriculture Electives[5]	6	Agriculture Elective	3
Communications Course[9]	3	Agr. 214—Advanced Agricultural Journalism	3
Humanities Sequence Course[8]	3	Communications Course(s)	4 or 6
Open Elective	3	Humanities Elective	3
Social Sciences Elective	3 or 4	Social Sciences Elective	3 or 4

FOURTH YEAR

	18 HOURS		18 HOURS
Agriculture Elective	3	Agriculture Elective	3
Communications Courses	6	Communications Courses	6
Open Electives	6	Open Electives	6
Social Sciences Elective	3	Social Sciences Elective	3

NOTES

[1] An orientation course required of all freshmen in agriculture.

[2] A student in this curriculum is required to complete either Mathematics 111, Algebra, five hours; or Mathematics 112, College Algebra, three hours; or pass the placement examination in mathematics.

[3] Speech 111 and 112, Verbal Communication, both four-hour courses, may be substituted for Rhetoric 101 and 102 and Speech 101.

[4] To take Chemistry 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chemistry 100 and have Mathematics 111 or 112 or the equivalent before enrolling in Chemistry 101.

[5] A minimum of thirty-five hours of agriculture courses required, including fifteen hours at the 200–300 level.
[6] A miniumum of three hours required from chemistry (beyond 101), mathematics (beyond algebra), geology, or physics.
[7] A mimimum of twenty hours required, including Economics 108 and an approved six-hour sequence (see page 188).
[8] A minimum of nine hours required, including an approved six-hour sequence (see page 188).
[9] A minimum of twenty hours of College of Communications courses required, including those prescribed for the student's selected option (listed below).

AGRICULTURE CORE COURSES

In addition to Agriculture 100, one course from three of the four areas listed below must be completed by each student in this curriculum.

	HOURS
Agricultural Economics:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Agricultural Mechanization and Food Science:	
Agr. Mech. 100—Engineering Applications in Agriculture, or	
F.S. 101—Food in Modern Society	3
Animal Sciences:	
An. Sci. 100—Introduction to Animal Science, or	
D.S. 100—Introduction to Dairy Production	3
Plant and Soil Sciences:	
Agron. 101—Introductory Soils, or	
Agron. 121—Principles of Field Crop Science, or	
For. 100—Farm Forestry, or	
Hort. 100—Introductory Horticulture	3 or 4

PRESCRIBED COURSES IN COMMUNICATIONS

A student will complete one of the following options:

ADVERTISING OPTIONS

Adv. 281—Introduction to Advertising
Adv. 382—Advertising Creative Strategy
Adv. 383—Advertising Media Policy and Strategy
Adv. 384—Advertising Campaigns
Electives in communications to complete twenty-hour requirement.

NEWS-EDITORIAL OPTION

Journ. 204—Typography
Journ. 211—Newswriting
Journ. 321—News Editing
One course from the following:
- Journ. 217—History of Communications
- Journ. 218—Communications and Public Opinion
- Journ. 220—Processes and Systems of Communications
- Journ. 231—Mass Communications in a Democratic Society
- Journ. 241—Law and Communications
- Journ. 251—Social Aspects of Mass Communications

One course from the following:
- Journ. 212—Public Affairs Reporting
- Journ. 323—Advanced Reporting
- Journ. 326—Magazine Article Writing
- Journ. 330—Magazine Editing
- Journ. 344—Community Newspaper Publication
- Radio-TV 355—Television News

Electives in communications to complete twenty-hour requirement.

RADIO-TELEVISION OPTION

Journ. 211—Newswriting
Radio-TV 252—Television Laboratory
Radio-TV 261—Principles of Rodio and Television Broadcasting
Electives in communications to complete twenty-hour requirement, including ot least six hours of radio-TV courses in addition to 252 and 261.

Curriculum in Agricultural Engineering

For the Degree of Bachelor of Science in Agricultural Engineering

This curriculum, outlined on page 301, is administered in the College of Engineering. Requirements for the first year are the same as in other engineering curricula. Courses in agriculture and agricultural engineering begin in the second year. In the senior year the student chooses technical electives for specialization in one of the following: electric power and processing, farm structures, power and machinery, or soil and water.

For the Degrees of Bachelor of Science in Agriculture Engineering and Bachelor of Science in Agriculture

Students may obtain bachelor's degrees in both agricultural engineering and agricultural science in five years by choosing the curriculum in agricultural science, option 3, on page 200. Students following the five-year program should enroll in the College of Agriculture for their first three or four years of work and then transfer to the College of Engineering for the last one or two years.

Curriculum in Agricultural Industries

For the Degree of Bachelor of Science in Agriculture

This curriculum provides a broad selection of courses in agricultural sciences, natural sciences, economics and other social sciences, business administration, finance, communications, and the humanities. It is designed to prepare students for careers in those industries and businesses which service or are related to agriculture. A minimum of twenty-seven hours of commerce and business courses is required.

During the first two years, this curriculum closely parallels the requirements of the core curriculum in agriculture. Students desiring to transfer from one to the other during the first two years may do so with little difficulty.

Examples of specific opportunities for employment are:

1. **Farm Supplies.** Marketing of feed, seed, fertilizer, machinery, equipment, and other supplies to farmers.

2. **Agricultural Commodities.** Marketing of agricultural commodities in local, intermediate, and central markets.

3. **Food and Food Products.** Distribution of food and food products in wholesale and retail markets, including institutional users.

4. **Agricultural Real Estate and Finance.** Services related to the appraisal, financing, ownership, and transfer of agricultural property.

An adviser assists each student in planning a specific program.

Upon completion of the curriculum requirements and a minimum of 126 hours of credit, exclusive of physical education, the student is awarded the degree of Bachelor of Science in Agriculture.

SAMPLE PROGRAM FOR FIRST TWO YEARS

FIRST YEAR

FIRST SEMESTER — 15 TO 18 HOURS		SECOND SEMESTER — 16 TO 18 HOURS	
Agr. 100—Agriculture in Modern Society[1]	1	Agriculture Core Course	3 or 4
Agriculture Core Course	3 or 4	Chem. 101—General Chemistry[4]	4
Math. 111—Algebra, or Math. 112—College Algebra[2]	5 or 3	Math. 114—Plane Trigonometry, or Math. 124—Introductory Analysis for Social Scientists, I[2]	2 or 3
Natural Science Course	3 to 5	Natural Science Course	3 to 5
Rhet. 101—Rhetoric and Composition[3]	3	Rhet. 102—Rhetoric and Composition[3]	3
Physical Education	(1)	Physical Education	(1)

SECOND YEAR

16 TO 18 HOURS		15 TO 18 HOURS	
Agriculture Core Course	3 or 4	Agriculture Elective	3
Business Course[5]	3	Business Courses	6
Natural Science Course	3 to 5	Journalism, Speech, or Rhetoric Elective[7]	2 or 3
Social Science or Humanities Course[6]	3	Social Science or Humanities Courses[6]	3 or 6
Speech 101—Principles of Effective Speaking[3]	3	Physical Education	(1)
Physical Education	(1)		

NOTES

[1] An orientation course required of all freshmen in agriculture.

[2] Students without college credit in algebra are required to take the Mathematics Placement Test. Those who, on the basis of this test, qualify for exemption from algebra, need not take Mathematics 111 or 112. Those who qualify for exemption from trigonometry, or who wish to take Mathematics 124, need not take Mathematics 114. The recommended mathematics sequence beyond algebra is Mathematics 124 and Mathematics 134. These two courses, or their equivalent, are prerequisite courses for Economics 171 and 172, Business Administration 210, and Business Administration 202. The alternate mathematics sequence is Mathematics 114, or exemption by the Placement Test, and Mathematics 120, Calculus and Analytic Geometry, or a course in analytic geometry.

[3] Speech 111 and 112, Verbal Communication, four hours each, may be substituted for Rhetoric 101, 102, and Speech 101.

[4] Students who have not had high school chemistry and those who do not earn a satisfactory score on the Chemistry Placement Test must take Chemistry 100 and have Mathematics 111 or 112 or the equivalent before enrolling in Chemistry 101.

[5] Economics 102 or 108 is recommended from this group for the sophomore year.

[6] See approved Humanities and Social Science courses on pages *188* and *189*.

[7] One course in journalism, rhetoric, or speech is required in addition to Rhetoric 101, 102, Speech 101; or Speech 111 and 112.

AGRICULTURE CORE COURSES

In addition to Agriculture 100, one course from three different areas of the four areas listed below must be completed by each student in this curriculum.

	HOURS
Agricultural Economics:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Agricultural Mechanization and Food Science:	
Agr. Mech. 100—Engineering Applications in Agriculture, or	
F.S. 101—Food in Modern Society	3
Animal Sciences:	
An. Sci. 100—Introduction to Animal Science, or	
D.S. 100—Introduction to Dairy Production	3
Plant and Soil Sciences:	
Agron. 101—Introductory Soils, or	
Agron. 121—Principles of Field Crop Science, or	
For. 100—Farm Forestry, or	
Hort. 100—Introductory Horticulture	4 or 3

NATURAL SCIENCE COURSES GROUP

In addition to the chemistry and mathematics courses listed for the first two years, each student must complete *three courses from* the following:

	HOURS
Bot. 100—General Botany, or Microbiol. 100—Introductory Microbiology	4 or 3
Chem. 102—General Chemistry	4
Geol. 101—Physical Geology, or Geol. 105—Agricultural Geology	4
Math. 120—Calculus and Analytic Geometry, or Math. 134—Introductory Analysis for Social Scientists, or analytic geometry	4 or 5
Zool. 104—Elementary Zoology, or Physiol. 103—Introduction to Human Physiology	4

BUSINESS COURSES GROUP

Each student in this curriculum must take a minimum of twenty-seven hours from the following:

	HOURS
Econ. 102—Principles of Economics, I, and Econ. 103—Principles of Economics, II; or Econ. 108—Elements of Economics, and Econ. 300—Intermediate Micro-Economic Theory	6
One or more courses from each of the following:	
Fin. 150—Money, Credit, and Banking, or Fin. 254—An Introduction to Business Financial Management, or Fin. 257—Corporation Finance, or Agr. Econ. 302—Financing Agriculture	3
Bus. Adm. 247—Introduction to Management, or Bus. Adm. 210—Production Management and Organization	3
Bus. Adm. 202—Principles of Marketing, or Bus. Adm. 272—Industrial Selling, or Agr. Econ. 230—Marketing of Agricultural Products, or Agr. Econ. 238—Distribution of Farm Supplies	3
Two courses from:	
Accy. 101—Principles of Accounting I, or Accy. 201—Fundamentals of Accounting	3
Computer Science	3
Statistics[1]	3 or 4
Two courses elected from: accountancy, advertising, business administration, economics, or finance	6

NOTES

[1] To be chosen from Economics 171 or 172, or Agronomy 340, or Agriculture Economics 341, or Mathematics 161. If either Agronomy 340 or Agricultural Economics 341 is used to satisfy this requirement, credit may not also be counted toward agriculture hours.

THIRD AND FOURTH YEARS

The general requirements, in addition to the courses listed for the first two years, include completion of:

1. A minimum of twenty-seven hours of business courses from those listed.
2. Agriculture electives to bring total agriculture to thirty-five hours.
3. An approved six-hour sequence in the humanities (see page *188*).
4. A minimum of nine hours of approved social science courses, other than economics. (See page 188.)
5. Sufficient open electives to bring the total hours to 126, exclusive of physical education.

SUGGESTED ELECTIVE COURSES IN AGRICULTURE

The following list of agriculture courses is intended as a guide from which electives in the various interest fields may be chosen. Other courses may be selected with approval of the adviser. A minimum of twenty-six hours is required.

AGRICULTURAL COMMODITIES	HOURS
Agr. Econ. 230—Marketing of Agricultural Products	3
Agr. Econ. 238—Distribution of Farm Supplies	3
Agr. Econ. 331—Grain Marketing	3
Agr. Econ. 332—Livestock Marketing	3
Agr. Econ. 334—Marketing of Dairy Products	3
Agr. Econ. 335—Economics of Food Distribution	3
Agr. Econ. 342—Agricultural Prices	3
Agron. 321—Ecological and Physiological Factors Affecting Crop Production	5
An. Sci. 103—Market Classes and Grades of Livestock	3
An. Sci. 104—Selection and Use of Meat	2
An. Sci. 221—Animal Nutrition	4
An. Sci. 301—Beef Production	3
An. Sci. 302—Sheep Production	3 or 4
An. Sci. 303—Pork Production	3
An. Sci. 304—Poultry Management	3 or 4
D.S. 320—Nutrition and Digestive Physiology of Ruminants	3
F.S. 101—Food in Modern Society	3

AGRICULTURAL REAL ESTATE AND FINANCE	HOURS
Agr. Econ. 220—Farm Management	3
Agr. Econ. 302—Financing Agriculture	3
Agr. Econ. 303—Agricultural Law	3
Agr. Econ. 312—Farm Appraisal	5
Agr. Econ. 342—Agricultural Prices	3
Agr. Mech. 252—Mechanics of Soil and Water Conservation	3
Agr. Mech. 272—Farm Buildings	3
Agron. 101—Introductory Soils	4
Agron. 301—Soil Survey, with Emphasis on Illinois Soils	3

FARM SUPPLIES	HOURS
Agr. Econ. 220—Farm Management	3
Agr. Econ. 238—Distribution of Farm Supplies	3
Agr. Econ. 342—Agricultural Prices	3
Agr. Mech. 221—Farm Power and Machinery Management	4
Agr. Mech. 272—Farm Buildings	3
Agr. Mech. 281—Farmstead Mechanization	3
Agron. 303—Soil Fertility	3
Agron. 304—Soil Management and Conservation	3
Agron. 322—Forage Crops and Pastures	3
Agron. 323—Principles of Plant Breeding	3
Agron. 326—Weeds and Their Control	3
An. Sci. 221—Animal Nutrition	4
An. Sci. 301—Beef Production	3
An. Sci. 302—Sheep Production	3 or 4
An. Sci. 303—Pork Production	3
An. Sci. 304—Poultry Management	3 or 4
D.S. 305—Genetics and Animal Improvement	3
D.S. 320—Nutrition and Digestive Physiology of Ruminants	3
Entom. 101—Agricultural Entomology	3
Plant. Path. 204—Introductory Plant Pathology	3

FOOD AND FOOD PRODUCTS	HOURS
Agr. Econ. 230—Marketing of Agricultural Products	3
Agr. Econ. 335—Economics of Food Distribution	3
Agr. Econ. 342—Agricultural Prices	3
An. Sci. 104—Selection and Use of Meats	2
F.S. 101—Food in Modern Society	3
F.S. 202—Sensory Evaluation of Foods	3
F.S. 260—Raw Materials for Processing	4
F.S. 332—Principles of Sanitation in the Processing and Handling of Foods	2
Home Econ. 120—Elementary Nutrition	2
Hort. 242—Vegetable Crops Production	3

Curriculum in Agricultural Science

For the Degree of Bachelor of Science in Agriculture

This curriculum is especially designed for students who plan to do graduate study in agricultural fields or for those who wish to engage in professional work requiring more science, mathematics, or engineering than is included in the core curriculum in agriculture. To be eligible for admission to the curriculum, students entering as freshmen must rank in the upper half of their high school class; those entering as transfers must have a scholastic average in their collegiate work of not less than 3.5 in terms of the grading system of the University of Illinois. Once enrolled, they must maintain at least an average of 3.5 to remain in and graduate from the curriculum. A minimum of 126 hours of credit is required for graduation, exclusive of physical education.

Options 1 and 2 provide an opportunity for planning individual programs of study under the supervision of a faculty adviser qualified in the student's special field of interest. Option 3 includes many prescribed courses both in agriculture and in engineering. Careful scheduling of courses is necessary.

Option 1. For students desiring preparation for graduate study or professional work in animal, plant, or soil science.

Option 2. For students desiring preparation for graduate study or professional work in the fields included in agricultural economics, agricultural law, and rural sociology.

Option 3. For students enrolled in the five-year combined agricultural science and agricultural engineering program. All requirements of the combined curriculum as outlined on the following pages must be completed to satisfy requirements for a degree in agriculture.

SUMMARY	OPTIONS 1 AND 3 MINIMUM HOURS	OPTION 2 MINIMUM HOURS
General University Requirements (physical education and rhetoric)	6	6
Group I: College of Agriculture Courses (fifteen of the thirty hours must be at the 200–300 level)	30	30
In Option 3, a maximum of fifteen hours of agricultural engineering and agricultural mechanization courses may be credited toward the degree in agriculture.		
Group II: Humanities (for approved sequences, see page 188)	6	6
Group III: Social Sciences (for approved sequences and electives, see page 188)	9	16
In Option 2, at least eight hours in economics must be included.		
Group IV: Biological Science (botany, entomology, microbiology, physiology, zoology)	10	6
In Options 1 and 3, a total of forty-five hours in Groups IV and V, with a minimum of ten hours in each must be completed.		
Group V: Physical Science (biochemistry, chemistry, geology, mathematics, physics)	10	16
In Options 1 and 3, a total of forty-five hours in Groups IV and V, with a minimum of ten hours in each, must be completed.		
In Option 3, Theoretical and Applied Mechanics 150 and 211 may be counted toward Group V.		
Electives (unrestricted)	30	46
Total Required for Graduation	126	126

OPTION 1. SAMPLE PROGRAM

FIRST YEAR

FIRST SEMESTER	15 TO 17 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Agr. 100—Agriculture in Modern Society	1	Bot. 100—General Botany, or Zool. 104—Elementary Zoology	4
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry	4
Math. 111—Algebra, or Math. 112—College Algebra[2]	5 or 3	Rhet. 102—Rhetoric and Composition	3
Math. 114—Plane Trigonometry[2]	2	Electives	4 or 5
Rhet. 101—Rhetoric and Composition	3	Physical Education	(1)
Electives	3		
Physical Education	(1)		

SECOND, THIRD, AND FOURTH YEARS

The programs for the second, third, and fourth years of Option 1 must be planned in consultation with the student's faculty adviser.

No student may enter the agricultural science curriculum for the first time after the beginning of his senior year in college except by petition approved by the associate dean of the college.

NOTES

[1] Chemistry 101 has the prerequisite of a satisfactory score on the Chemistry Placement Examination and Mathematics 111 or 112, or exemption therefrom. Students not exempt from Mathematics 111 or 112 should delay Chemistry 101 until the second semester.

[2] Students who gain exemption from algebra and trignometry may omit beginning courses in mathematics and enroll in more advanced courses.

OPTION 2. SAMPLE PROGRAM

FIRST YEAR

FIRST SEMESTER	15 TO 17 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Agr. 100—Agriculture in Modern Society	1	Bot. 100—General Botany, or Zool. 104—Elementary Zoology	4
Agr. Econ. 100—Introductory Agricultural Economics	3	Math. 114—Plane Trigonometry,[1] or Math. 124—Introductory Analysis for Social Scientists, or Chem. 101—General Chemistry	2 to 4
Math. 111—Algebra, or Math. 112—College Algebra, or advanced mathematics[1]	5, 3, or 2	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Agricultural Electives	3 to 6
Electives	3 to 6	Physical Education	(1)
Physical Education	(1)		

SECOND, THIRD, AND FOURTH YEARS

The programs for the second, third, and fourth years of Option 2 must be planned in consultation with the student's faculty adviser.

No student may enter the agricultural science curriculum for the first time after the beginning of his senior year in college except by petition approved by the associate dean of the college.

NOTES

[1] Students who gain exemption from algebra and trigonometry may omit beginning courses in mathematics and enroll in more advanced courses.

OPTION 3. FIVE–YEAR COMBINED PROGRAM IN AGRICULTURAL SCIENCE AND AGRICULTURAL ENGINEERING FOR THE DEGREES OF BACHELOR OF SCIENCE IN AGRICULTURAL AND BACHELOR OF SCIENCE IN AGRICULTURAL ENGINEERING

Students enroll in the College of Agriculture for the first three years.

Students who are admitted with a deficiency in foreign language should remove the deficiency within the first three years.

FIRST YEAR

FIRST SEMESTER	15 TO 18 HOURS
Agr. 100—Agriculture in Modern Society, or Eng. 100—Engineering Lecture	1–0
Chem. 101—General Chemistry[1]	4
Math. 111—Algebra, or Math. 112—College Algebra[2]	5 or 3
Math. 114—Plane Trigonometry[2]	2
Rhet. 101—Rhetoric and Composition	3
Electives	0 to 3
Physical Education	(1)

SECOND SEMESTER	16 HOURS
Chem. 102—General Chemistry	4
G.E. 103—Engineering Graphics, I	3
Math. 120—Calculus and Analytic Geometry	5
Rhet. 102—Rhetoric and Composition	3
Physical Education	(1)

SECOND YEAR	17 HOURS
Agr. Eng. 126—Engineering in Agriculture, I	3
Bot. 100—General Botany	4
Math. 130—Calculus and Analytic Geometry	5
Physics 106—General Physics (Mechanics)	4
Physical Education	(1)

	18 HOURS
Agr. Eng. 127—Engineering in Agriculture, II	3
Agron. 121—Principles of Field Crop Science	4
C.S. 101—Introduction to Automatic Digital Computing	3
Math. 140—Calculus and Analytic Geometry	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Physical Education	(1)

THIRD YEAR	18 OR 19 HOURS
Agricultural Engineering Technical Elective, I	3
Econ. 108—Elements of Economics	3
Geol. 105—Agricultural Geology, or Geol. 250—Geology for Engineers	4 or 3
Math. 345—Differential Equations and Orthogonal Functions	3
Physics 108—General Physics (Wave Motion, Sound, Light, Modern Physics)	4
T.A.M. 150—Analytical Mechanics (Statics)	2

	17 OR 18 HOURS
Agricultural Engineering Technical Elective, I	3
Agron. 101—Introductory soils	4
T.A.M. 211—Analytical Mechanics (Dynamics)	3
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3
T.A.M. 223—Mechanical Behavior of Solids	1
Elective[3]	3 or 4

Students may transfer to the College of Engineering in the fourth year.

FOURTH YEAR	15 TO 19 HOURS
Agr. Econ. 220—Farm Management	3
C.E. 261—Structural Theory, I, or M.E. 220, Mechanics of Machinery	3 or 4
E.E. 220—Basic Electrical Engineering	3
M.E. 209—Thermodynamics	3
Electives[3]	3 to 6

	16 OR 17 HOURS
Agr. Eng. 298—Seminar	1
T.A.M. 235—Fluid Mechanics	4
Technical Elective	3
Electives[3]	8 or 9

Students must be enrolled in the College of Engineering for the fifth year.

FIFTH YEAR	15 HOURS
Agricultural Engineering Technical Elective, II	3
Technical Elective	3
Electives[3]	9

	15 OR 16 HOURS
Agr. Eng. 299—Undergraduate Thesis	2
Agricultural Engineering Technical Elective, II	3
Electives[3]	10 or 11

NOTES

[1] Chemistry 101 has the prerequisite of a satisfactory score on the Chemistry Placement Examination and Mathematics 111 or 112, or exemption therefrom. Students not exempt from Mathematics 111 or 112 should delay Chemistry 101 until the second semester.

[2] Students with three to four years of high school mathematics, including trigonometry, and a satisfactory grade on the Mathematics Placement Test may take Mathematics 120 the first semester and follow the Common Program for Freshmen in the College of Engineering.

[3] Electives must include the following:

1. Four hours of agriculture, other than agricultural engineering and agricultural mechanization, Agronomy 101 and 121, and Agricultural Economics 220.
2. Six hours of biological science in addition to Botany 100 (botany, entomology, microbiology, physiology, and zoology).
3. A six-hour sequence in humanities courses (see page *188*). Since the list of courses which the College of Engineering and College of Agriculture accept for humanities varies, students should be careful to select those which are *acceptable* to both colleges.
4. A minimum of nine hours of approved social sciences, including Economics 108, and an approved six-hour sequence in social science. Since the list of courses which the College of Engineering and College of Agriculture accept for social science varies, students should be careful to select those which are acceptable to both colleges.
5. Sufficient approved electives (normally three hours) in the humanities in addition to item 3 above to satisfy the College of Engineering requirements (see page 297).
6. Sufficient open electives to total the minimum curriculum requirements of 160 hours exclusive of physical education. All requirements of the combined curriculum as outlined must be completed to satisfy the requirements for a degree in agriculture.

AGRICULTURAL ENGINEERING TECHNICAL ELECTIVES

Each student must have a minimum of twelve hours of agricultural engineering technical electives. These hours must include at least two courses from Group I and two courses from Group II listed below.

Group I

Agr. Eng. 236—Machine Characteristics and Mechanisms	3
Agr. Eng. 287—Environmental Control of Plants and Animals	3
Agr. Eng. 311—Instrumentation and Measurements	3 or 4
Agr. Eng. 340—Introduction to Applied Statistics	3

Group II

Agr. Eng. 277—Design of Concrete and Steel Structures for Agriculture	3
Agr. Eng. 336—Design of Agricultural Machinery	3
Agr. Eng. 346—Tractors and Prime Movers	3
Agr. Eng. 356—Soil Conservation Structures	3
Agr. Eng. 357—Land Drainage	3
Agr. Eng. 387—Agricultural Process Engineering	3

TECHNICAL ELECTIVES

A minimum of six hours is required. All courses must satisfy the College of Engineering requirements as given on page 298 of this catalog.

Students desiring to specialize in a specific area of agricultural engineering may use the following lists as guides in choosing their technical electives:

ELECTRIC POWER AND PROCESSING	HOURS
Agr. Eng. 236	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 336	3
Agr. Eng. 340	3
Agr. Eng. 387	3
E.E. 232	3
E.E. 233	3

POWER AND MACHINERY	HOURS
Agr. Eng. 236	3
Agr. Eng. 311	3
Agr. Eng. 336	3
Agr. Eng. 340	3
Agr. Eng. 346	3
M.E. 224	3
M.E. 234	3

FARM STRUCTURES	HOURS
Agr. Eng. 277	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 340	3
C.E. 214	3
C.E. 262	3

SOIL AND WATER	HOURS
Agr. Eng. 277	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 340	3
Agr. Eng. 356	3
Agr. Eng. 357	3

Core Curriculum in Agriculture

For the Degree of Bachelor of Science in Agriculture

This is a core curriculum in the sense that it provides for a common core program for the first two years. All students in agriculture, except those in agricultural communications, agricultural occupations teachers, agricultural science, dairy technology, ornamental horticulture, food science, forest science, home economics, preveterinary medical, restaurant management, and wood science, pursue the same general core program for the first two years. The student who starts in the core curriculum may select one of the approved majors for the junior and senior years, or he may continue with a broad general program by selecting the general major.

Freshmen may enter this curriculum without specifying a major but must make their choice of major not later than the beginning of the junior year. Transfer students entering this curriculum with forty-five or more semester hours must indicate their proposed major on the application for admission.

The purposes, objectives, and requirements of the various majors and options are outlined on the following pages.

The core program for the first two years includes a foundation in basic sciences essential to a better understanding of agriculture. In addition, the student has a choice of introductory courses in agriculture. By the proper choice of basic courses related to the student's ultimate objective and major, the student is ready to proceed with more advanced courses in his junior and senior years. Agriculture 100, required of all freshmen in agriculture, is designed to assist the student in clarifying his objectives.

Upon completion of this curriculum, with an approved major and a minimum of 126 hours of credit, exclusive of physical education, the student is awarded the degree of Bachelor of Science in Agriculture.

PRESCRIBED COURSES	HOURS
Rhet. 101, 102—Rhetoric and Composition[1]	6
Speech 101—Principles of Effective Speaking[1]	3
Physical Education: Four semesters	0
Agr. 100—Agriculture in Modern Society[2]	1
Agriculture Core Courses: Three as listed below and as required for student's major	9 or 10
Biological Sciences: Two or more of the following areas as required by the student's major[3] Bot. 100—General Botany Microbiol. 100—Introductory Microbiology, and Microbiol. 101—Introductory Experimental Microbiology Zool. 104—Elementary Zoology	8 or 9
Chem. 101—General Chemistry[4]	4
Chem. 102—General Chemistry (including organic)[5]	4
Math. 111—Algebra, or Math. 112—College Algebra, or exemption by mathematics placement test	5 or 3 or 0
Math. 114—Plane Trigonometry, or Math. 124—Introductory Analysis for Social Scientists; or one course from computer science or statistics; or exemption from Math. 114 by the Mathematics Placement Test[6]	0 to 4
Econ. 108—Elements of Economics[7]	3
Geol. 105—Agricultural Geology	4
Social Science Sequence (see page 188)	6
Humanities Sequence (see page 188)	6

AGRICULTURE CORE COURSES

In addition to Agriculture 100, one course from three of the four areas listed below must be completed by each student in this curriculum.

	HOURS
Agricultural Economics:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Agricultural Mechanization and Food Science:	
Agr. Mech. 100—Engineering Applications in Agriculture, or	
Food Sci. 101—Food in Modern Society	3
Animal Sciences:	
AnSci. 100—Introduction to Animal Science, or	
Dairy Sci. 100—Introduction to Dairy Production	3
Plant and Soil Sciences:	
Agron. 101—Introductory Soils, or	
Agron. 121—Principles of Field Crop Science, or	
For. 100—Farm Forestry, or	
Hort. 100—Introductory Horticulture	3 or 4

NOTES

[1] Speech 111 and 112, Verbal Communication, 4 hours each, may be substituted for Rhetoric 101 and 102, and Speech 101.

[2] Agriculture 100, Agriculture in Modern Society, 1 hour, is required for entering freshmen only. Transfer students are exempt.

[3] Biological science requirements by major are:

Agricultural Economics—two courses from Botany 100; Microbiology 100 and 101; Zoology 104; or one course from these three areas plus one of the following: Mathematics 124, or 120, or 122, or 123.

Agricultural Mechanization—two courses from Botany 100; Microbiology 100 and 101; Zoology 104.

Agronomy—Botany 100; and Microbiology 100 and 101, or Zoology 104.

Animal Science—Botany 100, Microbiology 100 and 101, and Zoology 104.

Dairy Science—two courses from Botany 100; Microbiology 100 and 101; Zoology 104.

General Agriculture—two courses from Botany 100; Microbiology 100 and 101; Zoology 104.

Horticulture—Botany 100; and Microbiology 100 and 101 or Zoology 104.

[4] To take Chemistry 101, a student must have completed Mathematics 111 or 112 (or equivalent) or have gained exemption by the Mathematics Placement Test. He must also have a satisfactory score on the Chemistry Placement Test or take Chemistry 100 (2 hours) before enrolling in Chemistry 101.

[5] Chemistry 102, which includes an introduction to organic chemistry, is required except for (a) majors in agricultural economics, *general option, marketing option* or *rural sociology option*, who may substitute Mathematics 134; or 130 or 131; or 132 or 133; or 135, for Chemistry 102; and (b) majors in agricultural mechanization who may substitute Physics 102 for Chemistry 102.

[6] See requirements for the various majors. Some require additional mathematics, computer science, or statistics.

[7] Economics 102 and 103 may be substituted for Economics 108 and will provide a better foundation for students planning to take additional courses in economic theory.

SAMPLE PROGRAM FOR FIRST YEAR

FIRST SEMESTER	14 TO 17 HOURS
Agr. 100—Agriculture in Modern Society	1
Agriculture Core Course	3 or 4
Biological Science	4 or 5
Mathematics or Chemistry	2 to 5
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communications	3 or 4
Physical Education	(1)

SECOND SEMESTER	14 TO 17 HOURS
Agriculture Core Course	3 or 4
Biological Science or Social Science	3 to 5
Chemistry or Mathematics	4 or 2
Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	(1)

SECOND YEAR

The student should, in consultation with his adviser, select from those courses listed as prescribed and appropriate to his area of interest.

THIRD AND FOURTH YEARS

For the third and fourth years, see requirements of the approved major. In addition to the Prescribed Courses listed on page 203, the requirements include completion of:

1. All prescribed courses listed for the major.

2. Additional courses as required to give forty hours in agriculture. One-half of the agriculture hours, i.e., twenty hours, must be taken at the University of Illinois.

3. Sufficient open electives to bring the total hours to 126, exclusive of physical education.

Majors for Junior and Senior Years in Core Curriculum in Agriculture

MAJOR IN AGRICULTURAL ECONOMICS (Including Rural Sociology)

The major and options in agricultural economics are to prepare students for employment in positions requiring economic decision-making in agriculture and related occupations, for effective rural group leadership, and for graduate work. The options make it possible for students to specialize within the diverse subject matter, yet each is flexible enough to allow considerable freedom in choosing elective courses. In declaring a major in agricultural economics, each student is required to choose one of the following options: farm management, agricultural marketing, general agricultural economics, or rural sociology.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

FARM MANAGEMENT OPTION	HOURS
Prescribed Courses in Agriculture:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Agr. Econ. 220—Farm Management	3
Agr. Econ. 324—Farm Operation	3
Agr. Econ. 325—Advanced Farm Management	3
Agron. 101—Introductory Soils	4
An. Sci. or D.S. 221—Animal Nutrition	4
Additional Agricultural Economics Courses	8
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Prescribed Non-Agriculture Course:	
Accy. 101—Principles of Accounting, or Accy. 201—Fundamentals of Accounting, or a course in statistics[1]	3 or 4
Humanities: An approved sequence (see page 188)	6
Social Sciences (see page 188)	9
Must include the following:	
Econ. 300—Intermediate Micro-Economic Theory 3	
Approved Social Science Elective 3	
Open Electives to bring total hours to	126

NOTES

[1] To be chosen from Economics 171 or 172, or Agronomy 340, or Agricultural Economics 341, or Mathematics 161.

AGRICULTURAL MARKETING OPTION	HOURS
Prescribed Courses in Agriculture:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Agr. Econ. 230—Marketing of Agricultural Products	3
Six hours from the following:	
Agr. Econ. 238—Distribution of Farm Supplies	3
Agr. Econ. 331—Grain Marketing	3
Agr. Econ. 332—Livestock Marketing	3
Agr. Econ. 334—Marketing of Dairy Products	3
Agr. Econ. 335—Economics of Food Distribution	3
Additional Agricultural Economics Courses	8

Elective Courses in Agriculture to bring total Agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences (see page 188)	6
Must include the following:	
Econ. 300—Intermediate Micro-Economic Theory	3
Approved Social Science Elective	3
Prescribed Non-Agriculture Courses:	
Accy. 201—Fundamentals of Accounting	3
One course from speech, journalism, or rhetoric	2 or 3
A course in statistics	3 or 4
To be chosen from Economics 171 or 172, or Agronomy 340, or Agricultural Economics 341, or Mathematics 161.	
Open Electives to bring total hours to	126

GENERAL AGRICULTURAL ECONOMICS OPTION

	HOURS
Prescribed Courses in Agriculture:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Nine hours from the following:	
Agr. Econ. 220—Farm Management	3
Agr. Econ. 230—Marketing of Agricultural Products	3
Agr. Econ. 302—Financing Agriculture	3
Agr. Econ. 303—Agricultural Law	3
Agr. Econ. 305—Agricultural Policies and Programs	3
Agr. Econ. 318—Land Economics	3
Agr. Econ. 341—Agricultural Economics Statistics	3
Rural Sociol. 117—Introduction to Rural Sociology	3
Additional Agricultural Economics Courses	8
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences (see page 188)	9
Must include the following:	
Econ. 300—Intermediate Micro-Economic Theory	3
Approved Social Science Elective	3
Prescribed Non-Agriculture Courses:	
Accy. 101—Principles of Accounting, or Accy. 201—Fundamentals of Accounting, or a course in statistics[1]	3 or 4
Open Electives to bring total hours to	126

NOTES

[1] To be chosen from Economics 171 or 172, or Agronomy 340, or Agricultural Economics 341, or Mathematics 161.

RURAL SOCIOLOGY OPTION

	HOURS
Prescribed Courses in Agriculture:	
Agr. Econ. 100—Introductory Agricultural Economics	3
Rural Sociol. 117—Introduction to Rural Sociology	3
Students with credit in Sociology 100 should substitute Rural Sociology 270.	
Rural Sociol. 277—Rural Social Change	3
Additional Rural Sociology or Agricultural Economics Courses	11
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences (see page 188)	12
Must include the following:	
Approved 200- or 300-level Sociology Courses	6
Open Electives to bring total hours to	126

MAJOR IN AGRICULTURAL MECHANIZATION

For students who are interested in emphasis in the areas of farm structures, conservation, farm power and farm machinery, in preparation for work with service organizations, retail dealers, power suppliers, contractors, farm management companies, or as farm operators.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
Agr. Econ. 220—Farm Management	3
Agr. Mech. 100—Engineering Applications in Agriculture	3
Agron. 101—Introductory Soils	4
Agron. 121—Principles of Field Crop Science	4
Fifteen hours from the following:	
Agr. Mech. 200—Agricultural Mechanics Shop. Construction Technology	3
Agr. Mech. 201—Agricultural Mechanics Shop: Electrical and Metal Work	3
Agr. Mech. 221—Farm Power and Machinery Management	4
Agr. Mech. 231—Farm Machinery Mechanisms	3
Agr. Mech. 241—Farm Tractor Power	3
Agr. Mech. 252—Mechonics of Soil and Water Conservation	3
Agr. Mech. 272—Farm Buildings	3
Agr. Mech. 281—Farmstead Mechanizotion	3
Agr. Mech. 300—Special Problems	1 to 4
Agr. Mech. 361—Development and Function of Family Housing	3
Agr. Mech. 381—Electro-Mechanical Agricultural Systems	3
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences: An approved six-hour sequence (see page 188) and a minimum of nine hours including Econ. 108—Elements of Economics	9
Other Prescribed Courses:	
Math. 114—Plane Trigonometry	2
Physics 101—General Physics (Mechanics, Heat, and Sound)	5
Physics 102—General Physics (Light, Electricity, and Magnetism) if Chemistry 102 is not taken	5
Eighteen hours from the following:	
Accy. 101—Principles of Accounting, I, Accy. 105—Principles of Accounting, II, or Accy. 201—Fundamentals of Accounting	3
Agr. Econ. 238—Distribution of Farm Supplies	3
Bus. Adm. 202—Principles of Marketing, or Bus. Adm. 272—Industrial Selling	3
Bus. Adm. 210—Management and Organizational Behavior	3
Bus. Adm. 212—Principles of Retailing	3
Bus. Adm. 247—Introduction to Management	3
Bus. Adm. 249—Human Relations	3
Bus. Adm. 261—Summary of Business Law	3
Computer Science	3
Ind. Eng. 232—Methods-Time Analysis	3
Rhet. 251—Business Writing	3
Rhet. 271—Sales Writing	2
Rhet. 272—Report Writing	2
Statistics Course	3
Open Electives to bring total hours to	126

MAJOR IN AGRONOMY

This major is designed for students who wish to specialize in crops, soils, or agronomy. For those who may desire later to pursue graduate work, adequate training may be obtained by suitable choices of electives within the framework of this major or in the agricultural science curriculum. Numerous employment opportunities exist in various agricultural industries for students who wish to major in the agricultural industries curriculum with emphasis in agronomy and with an adviser in agronomy.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
Agron. 101—Introductory Soils	4
Agron. 121—Principles of Field Crop Science	4
Agron. 290—Undergraduate Agronomy Seminar	1
Elective Courses in Agronomy[1,2,3]	18

Crops:	
Agron. 110—Plant and Animal Genetics	3
Agron. 319—Environment and Plant Ecosystems	3
Agron. 320—Crop Physiology	3
Agron. 322—Forage Crops and Pastures	3
Agron. 323—Principles of Plant Breeding	3
Agron. 326—Weeds and Their Control	3
Agron. 350—Crops and Man	3
Soils:	
Agron. 301—Soil Survey, with Emphasis on Ill. Soils	3
Agron. 303—Soil Fertility	3
Agron. 304—Soil Management and Conservation	3
Agron. 305—Biochem. Processes in Soil and Water Environment	3
Agron. 306—Dynamics of Soil Development	3
Agron. 307—Soil Chemistry	3
Agron. 308—Physics of the Plant Environment	4
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences: An approved six-hour sequence (see page 188) and a minimum of nine hours including Econ. 108—Elements of Economics	9
Other Prescribed Courses (Soils majors only): One year of physics	8 to 10
Open Electives to bring total hours to	126

NOTES

[1] Crops Option requires twelve hours from Agronomy—Crops and six hours from Agronomy—Soils. [2] Soils Option requires twelve hours from Agronomy—Soils and six hours from Agronomy—Crops. [3] Agronomy Option requires eighteen hours of Agronomy, with a minimum of six hours each from Crops and Soils.

MAJOR IN ANIMAL SCIENCE

For students interested in preparing for work in the fields of animal feeding and nutrition, animal breeding and genetics, animal production, or related fields of the livestock and poultry industry.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
An. Sci. 100—Introduction to Animal Science	3
An. Sci. 110—Plant and Animal Genetics	3
An. Sci. 204—Principles of Meat Technology	4
An. Sci. 221—Animal Nutrition	4
Two of the following:	
An. Sci. 206—Horse Production	3
An. Sci. 301—Beef Production	3
An. Sci. 302—Sheep Production	3 or 4
An. Sci. 303—Pork Production	3
An. Sci. 304—Poultry Management	3 or 4
Two of the following:	
Agron. 101—Introductory Soils	4
An. Sci. 230—Comparative Physiology of Reproduction, Lactation, and Growth	3
An. Sci. 305—Genetics and Animal Improvement	3
An. Sci. 320—Nutrition and Digestive Physiology of Ruminants	3
An. Sci. 330—Reproduction and Artificial Insemination of Farm Animals	3
An. Sci. 332—Livestock Marketing	3
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences: An approach six-hour sequence (see page 188) and a minimum of nine hours including Econ. 108—Elements of Economics	9
Prescribed Non-Agriculture Courses:	
Microbiol. 100—Introductory Microbiology and Microbiol. 101—Introductory Experimental Microbiology or Microbiol. 200—Microbiology, and Microbiol. 201—Experimental Microbiology	5

V.P.P. 202—Physiology of Domestic Animals, or Physiol. 103—Introduction to Human Physiology, or Physiol. 203—Human Physiology for Selected Students	3 to 5
Open Electives to bring total hours to	126

MAJOR IN DAIRY SCIENCE

The purpose of the major in dairy science is to provide training for students planning careers as dairy farm operators and managers, as fieldmen for milk plants, breed associations, feed companies, and governmental agencies, as control technicians or salesmen for feed manufacturers, as laboratory and field technicians in artificial insemination, and as breeding consultants.

In addition, this major provides a foundation for advanced study in preparation for careers as college teachers, research scientists in experiment stations and industry, and as extension specialists.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
Twenty hours from the following:	
Agr. Econ. 220—Farm Management	3
D.S. 110—Plant and Animal Genetics	3
D.S. 204—Dairy Cattle Evaluation	3
D.S. 205—Dairy Cattle Management	3
D.S. 221—Animal Nutrition	4
D.S. 230—Comparative Physiology of Reproduction, Lactation, and Growth	3
D.S. 305—Genetics and Animal Improvement	3
D.S. 320—Nutrition and Physiology of Ruminants	3
D.S. 330—Reproduction and Artificial Insemination of Farm Animals	3
D.S. 334—Marketing Dairy Products	3
F.S. 101—Food in Modern Society	3
Elective Courses in Agriculture at the 200–300 level	10
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities and Social Sciences: An approved six-hour sequence in the humanities and an approved six-hour sequence in the social sciences (see pages 188 and 189)	12
Prescribed Non-Agriculture Courses:	
Speech, Journalism, or Rhetoric Elective	2 or 3
Minimum of nine hours from the following:	
Accy. 201—Fundamentals of Accounting	3
Chemistry, beyond Chem. 101 and 102	
Entomology	
Mathematics, beyond minimum mathematics requirements	
Microbiology, beyond minimum biological science requirements	
Physics	
Physiol. 103—Introduction to Human Physiology, or any 200–300 level physiology course	4
V.P.P. 202—Physiology of Domestic Animals	3
Zool. 232—Comparative Vertebrate Anatomy, or any 200–300 level zoology course	5
Open Electives to bring total hours to	126

MAJOR IN GENERAL AGRICULTURE

For students who are interested in a broad basic training in agriculture, rather than in specialization within a departmental field of work. Areas for which such training is suited include farming, agricultural extension, agricultural services, plant protection, pretheological study, and others.

Students should refer to *A Handbook for Agriculture Students and Advisors* for suggested courses and programs of study for training in these areas within this major.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
Agron. 101—Introductory Soils	4
In addition to core courses in agriculture, at least three hours of credit in each of the following departments: Agricultural Economics, Agricultural Engineering (Agricultural Mechanization), Agronomy (in addition to Agronomy 101), Animal Science, Dairy Science, Horticulture	18
Elective Courses in Agriculture to bring total agriculture to a minimum of	50
Humanities: An approved sequence (see page 188)	6
Social Sciences: An approved six-hour sequence (see page 188) and a minimum of nine hours including Econ. 108—Elements of Economics	9
Open Electives to bring total hours to	126

MAJOR IN HORTICULTURE

For students who are interested primarily in general agriculture but desire a basic knowledge of horticulture. Emphasis is placed on the basic plant sciences to give a general background for the specialized phases of horticulture. By a careful choice of horticulture courses and electives, a student may prepare for the production of fruits, vegetables, or other specialized horticultural crops.

Students who are interested in the production of flowers and ornaments should enroll in the ornamental horticulture curriculum.

For common core requirements, see pages 203 and 204. Other courses required for this major are:

	HOURS
Prescribed Courses in Agriculture:	
Agron. 101—Introductory Soils	4
Entom. 101—Agricultural Entomology	3
Hort. 100—Introductory Horticulture	3
Hort. 110—Plant and Animal Genetics	3
Hort. 221—Plant Propagation	3
Plant. Path. 204—Introductory Plant Pathology	3
Additional Horticulture Courses	11
Elective Courses in Agriculture to bring total agriculture to a minimum of	40
Humanities: An approved sequence (see page 188)	6
Social Sciences: An approved six-hour sequence (see page 188) and a minimum of nine hours including Econ. 108—Elements of Economics	9
Prescribed Non-Agriculture Courses:	
Bot. 330—Plant Physiology	3
Bot. 335—Plant Physiology Laboratory	2
Open Electives to bring total hours to	126

Curriculum for Secondary Teachers of Agricultural Occupations

For the Degree of Bachelor of Science in Agriculture

The purpose of this curriculum is to prepare students to teach agriculture in schools offering agricultural occupations courses. A minimum of 126 hours of credit, excluding physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

PRESCRIBED COURSES IN AGRICULTURE

CORE COURSES	HOURS
Agr. 100—Agriculture in Modern Society	1
Agr. Econ. 100—Introductory Agricultural Economics	3
Agr. Mech. 100—Engineering Applications in Agriculture, or Agr. Mech. 200—Agricultural Mechanics Shop: Construction Technology	3
Agron. 101—Introductory Soils	4
Total	11

OTHER COURSES IN AGRICULTURE

Each student must select one of the options. The prescribed agriculture courses and elective agriculture courses must total forty-eight hours, including the eleven hours listed above, and must include a minimum of twenty hours of 200- to 300-level courses..... 37

PRESCRIBED NON–AGRICULTURAL COURSES

GENERAL EDUCATION COURSES	HOURS
Bot. 100—General Botany	4
Chem. 101—General Chemistry	4
Chem. 102—General Chemistry	4
Geol. 105—Agricultural Geology	4
Mathematics Placement Test, or Math. 111—Algebra, or Math. 112—College Algebra, or Math. 104—Elements of Algebra and Trigonometry	0 or 5 or 3
Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4
Speech 111 and Speech 112—Verbal Communication, or Rhet. 101 and Rhet. 102—Rhetoric and Composition, and Speech 101—Principles of Effective Speaking	8 or 9
Zool. 104—Elementary Zoology	4
Physical Education	(4)
Total	32 to 38

HUMANITIES	HOURS
An approved six-hour sequence	6

SOCIAL SCIENCES	HOURS
Econ. 108—Elements of Economics, or equivalent	3 or 4
Electives	6 to 8
For students interested in secondary education certification, these electives must be selected to fulfill certification requirements in political science and United States history. The course in political science must include instruction on the constitutions of Illinois and the United States.	
Total	9 to 12

PROFESSIONAL EDUCATION COURSES	HOURS
Ed. Psych. 211—Educational Psychology	3
Hist. Phil. Ed. 201—Foundations of American Education	2
Vo. Tech. Ed. 101—Nature of the Teaching Profession	2
Vo. Tech. Ed. 240—Principles of Vocational and Technical Education	2
Vo. Tech. Ed. 276—Student Teaching in Vocational Agriculture	5
Vo. Tech. Ed. 277—Programs and Procedures in Agricultural Education	5
Total	19

SUGGESTED SUPPORTING COURSES

The following listing is intended as a guide for students and advisers as appropriate courses for the various options (areas of concentration).

AGRICULTURAL PRODUCTION OPTION

Suggested Courses in Agriculture	HOURS
Agr. Econ. 220—Farm Management	3
Agr. Econ. 230—Marketing of Agricultural Products, or Agr. Econ. Elective—300-level course	3
Agr. Mech. 112—Tractors and Field Machinery, or Agr. Mech. 221—Farm Power and Machinery Management	3 or 4
Agr. Mech. 201—Agricultural Mechanics Shop: Electrical and Metalwork	3
Agron. 121—Principles of Field Crop Science	

An. Sci. or D.S. 221—Animal Nutrition	4
Animal Science or Dairy Science Elective	3

AGRICULTURAL SUPPLY OPTION

Suggested Courses in Agriculture	HOURS
Agr. 114—Agricultural Journalism	3
Agr. Econ. 220—Farm Management	3
Agr. Econ. 238—Distribution of Farm Supplies	3
Agr. Mech. 221—Farm Power and Machinery Management, or Agr. Mech. 252—Mechanics of Soil and Water Conservation, or Agr. Mech. 272—Farm Buildings, or Agr. Mech. 281—Farmstead Mechanization	3 or 4
Agron. 121—Principles of Field Crop Science	4
An. Sci. or D.S. 221—Animal Nutrition	4

Suggested Non-Agriculture Course	
Accy. 201—Fundamentals of Accounting	3

AGRICULTURAL MECHANIZATION OPTION

Suggested Courses in Agriculture	HOURS
Agr. Mech. 200—Agricultural Mechanics Shop: Construction Technology	3
Agr. Mech. 201—Agricultural Mechanics Shop: Electrical and Metalwork	3
Agr. Mech. 221—Farm Power and Machinery Management	4
Agr. Mech. 231—Farm Machinery Mechanisms	3
Agr. Mech. 241—Farm Tractor Power	3

AGRICULTURAL PRODUCTS (PLANTS) OPTION

Suggested Courses in Agriculture	HOURS
Agr. Econ. 230—Marketing of Agricultural Products	3
Agr. Econ. 331—Grain Marketing	3
Agr. Econ. 335—Economics of Food Distribution	3
Agr. Mech. 281—Farmstead Mechanization	3
Agron. 121—Principles of Field Crop Science	4
Agron. 326—Weeds and Their Control	3
Plant. Path. 204—Introductory Plant Pathology	3

AGRICULTURAL PRODUCTS (ANIMALS) OPTION

Suggested Courses in Agriculture	HOURS
Agr. Econ. 230—Marketing of Agricultural Products	3
Agr. Econ. 332—Livestock Marketing, or Agr. Econ. 334—Marketing of Dairy Products, or Agr. Econ. 335—Economics of Food Distribution	3
An. Sci. 104—Selection and Use of Meats, or An. Sci. 204—Principles of Meat Technology	2 or 4
F.S. 101—Food in Modern Society	3

Suggested Non-Agriculture Course	
Microbiol. 100—Introductory Microbiology, or Microbiol. 200—Microbiology	3

ORNAMENTAL HORTICULTURE OPTION

Suggested Courses in Agriculture	HOURS
Entom. 101—Agricultural Entomology	3
Hort. 100—Introductory Horticulture, or Hort. 242—Vegetable Crops Production, and Hort. 262—Fruit Science, I	3 or 6
Hort. 122—Greenhouse Management	3
Plant Path. 204—Introductory Plant Pathology	3

AGRICULTURAL RESOURCES AND FORESTRY OPTION

Suggested Courses in Agriculture	HOURS
Agr. Econ. 273—Recreation in Rural Areas	2
Agron. 304—Soil Management and Conservation	3
Entom. 101—Agricultural Entomology	3
For. 100—Farm Forestry	3
For. 220—Dendrology	4
Rur. Sociol. 117—Introduction to Rural Sociology, or Rur. Sociol. 270—Population and Humon Ecology	3

Program in Agriculture and Law

The College of Law requires a bachelor's degree as a prerequisite for admission. The agriculture and law program, therefore, will normally require seven years—four years leading to the B.S. degree in agriculture plus three years in the College of Law leading to the J.D. degree.

The student who is interested in this program may complete the requirements for a degree in any of the approved curricula of the college, but it is advisable that the student follow Option II of the agricultural science curriculum. Students interested in this program should ask to be assigned to an agriculture pre-law adviser.

Requirements for admission to the College of Law are as follows:

1. A degree from an accredited university or college.
2. A minimum 3.5 all-university grade average (based on 5.0 = "A").
3. A satisfactory score on the Law School Admission Test.

Curriculum in Dairy Technology

For the Degree of Bachelor of Science in Dairy Technology

The following program is designed for students interested in the business and technological aspects of dairy manufacturing or in research or teaching in the field of dairy technology. A minimum of 126 hours of credit, exclusive of physical education, is required for graduation.

All students specializing in dairy technology are expected to take an inspection trip either in the junior or senior year. This trip costs about $20.

FIRST YEAR FIRST SEMESTER	15 OR 16 HOURS	SECOND SEMESTER	17 HOURS
Agr. 100—Agriculture in Modern Society	1	Chem. 101—General Chemistry[3]	4
D.S. 100—Introduction to Dairy Production	3	Microbiol. 100—Introductory Microbiology, and Microbiol. 101—Introductory Experimental Microbiology	5
Math. 111—Algebra, or Math. 112—College Algebra[1]	5 or 3	Speech 112—Verbal Communication	4
Speech 111—Verbal Communication[2]	4	Elective	3
Elective	3	Physical Education	(1)
Physical Education	(1)		
SECOND YEAR	**16 HOURS**		**17 HOURS**
Chem. 102—General Chemistry	4	Chem. 131—Elementary Organic Chemistry	3
Econ. 108—Elements of Economics	3	Chem. 134—Elementary Organic Chemistry Laboratory	2
Rhet. 251—Business Writing	3	D.T. 213—Technical Control of Dairy Products	3
Electives (Group I or II)	5	F.S. 202—Processing and Quality Evaluation of Dairy and Food Products	3
Physical Education	(1)	Electives (Group I or II)	5
		Physical Education	(1)

THIRD YEAR	16 HOURS		16 HOURS
D.T. 211—Bacteriological Control of Dairy Plants	4	Accy. 201—Fundamentals of Accounting[4]	3
F.S. 201—Principles of Food and Dairy Product Processing	3	D.T. 310—Dairy Product Processing	4
Electives (Group I and II)	9	Electives (Group I and II)	9

FOURTH YEAR	16 HOURS		17 HOURS
D.T. 311—Dairy Product Processing	4	Electives	17
Elective (Group I or II)	3		
Electives	9		

NOTES

[1] Students who pass the Mathematics Placement Test are not required to take a mathematics course; however, Mathematics 114 is recommended. Those who are not exempt from algebra must take either Mathematics 111 or 112.
[2] Rhetoric 101, 102, and Speech 101 may be substituted for Speech 111 and 112.
[3] To take Chemistry 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chemistry 100 (2 hours) and have Mathematics 111 or 112 or equivalent before enrolling in Chemistry 101.
[4] Students interested in business management should take Accountancy 101 and 105. Credit may not be earned for both Accountancy 101 and 201.

GROUP I: ELECTIVES FROM SCIENCE AND COMMERCE

A minimum of fifteen hours from science[1] or commerce, at least six of which must be in courses above the 100 level. Examples of acceptable areas are accountancy, Advertising 281, business administration, chemistry, economics, engineering, finance, life sciences, mathematics, and physics.

Students who select economics courses in fulfillment of Group I or Group II may not count the same course in both groups.

Electives in the third and fourth years, chosen with the assistance of an adviser, can provide a background of general business training, a special knowledge of some business field, or a basis for graduate work in preparation for research.

GROUP II: HUMANITIES AND SOCIAL SCIENCES

An approved six-hour sequence in the humanities. An approved six-hour sequence and a minimum of nine hours in the social sciences, including Economics 108, see pages 188 and 189).

NOTES

[1] Acceptable life science courses consist of the following: biology, biophysics, botany, entomology, microbiology, physiology, and zoology. The following other science courses are also acceptable: Aviation 181, 182, and 183; computer science; Geography 201, 370; geology; Health Science 104, 110; theoretical and applied mechanics.

Curriculum in Food Science

For the Degree of Bachelor of Science in Food Science

This program is designed for students who wish to prepare for employment as food production, quality control, research, or technical sales workers in governmental agencies, educational institutions, and in such food processing industries as canning, freezing, fermenting, milling, and baking, vegetable oil processing, and confection manufacturing. A total of 130 hours of credit is required for graduation, exclusive of physical education.

Students are strongly urged to engage in at least one summer of employment in selected food processing industries and are required to go on a senior inspection trip of three days' duration. This trip costs about $20.

FIRST YEAR FIRST SEMESTER	17 HOURS	SECOND SEMESTER	18 HOURS
Agr. 100—Agriculture in Modern Society	1	Bot. 100—General Botany	4
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry	4
Math. 114—Plane Trigonometry[2]	2	Math. 120—Calculus and Analytic Geometry	5
Speech 111—Verbal Communication[3]	4	Speech 112—Verbal Communication[3]	4
Electives	5	Physical Education	(1)
Physical Education	(1)		
SECOND YEAR	**16 HOURS**		**16 HOURS**
Chem. 131—Elementary Organic Chemistry	3	Chem. 122—Elementary Quantitative Analysis	5
Chem. 134—Elementary Organic Chemistry Laboratory	2	Microbiol. 100—Introductory Microbiology	3
Math. 130—Calculus and Analytic Geometry	5	Microbiol. 101—Introductory Experimental Microbiology	2
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	Physics 102—General Physics (Light, Electricity, and Magnetism)	5
Physical Education	(1)	Physical Education	(1)
THIRD YEAR	**17 HOURS**		**17 HOURS**
Chem. 340—Principles of Physical Chemistry[4]	4	F.S. 202—Processing and Quality Evaluation of Dairy and Food Products	3
Chem. 341—Elementary Physical Chemistry Laboratory[4]	1	F.S. 363—Introduction to Process Engineering	3
F.S. 101—Food in Modern Society	3	Microbiol. 311—Food and Industrial Microbiology	3
F.S. 260—Raw Materials for Processing	4	Microbiol. 312—Techniques of Applied Microbiology	2
Electives	5	Electives	6
FOURTH YEAR	**16 OR 18 HOURS**		**18 HOURS**
Biochem. 354—Introduction to Biochemistry, or Biochem. 350—General Biochemistry and 355—General Biochemistry Laboratory	5 or 7	F.S. 206—Inspection Trip	0
F.S. 301—Food Processing	4	F.S. 302—Food Processing	4
Electives	7	F.S. 332—Principles of Sanitation in the Processing and Handling of Foods	2
		Electives	12

NOTES

[1] Students who do not make a satisfactory score on the Chemistry Placement Test must start with Chemistry 100 and defer Chemistry 101 until the second semester.

[2] Students who are not exempt from Mathematics 112, College Algebra, by the Mathematics Placement Test and do not have college credit for algebra must take Mathematics 111 or 112. Those who are exempt from both Mathematics 112 and 114 may begin with Mathematics 120.

[3] Rhetoric 101, 102, and Speech 101 may be substituted for Speech 111 and 112.

[4] Students adequately qualified may substitute Chemistry 342 and 344 for Chemistry 340 and 341.

HUMANITIES

An approved six-hour sequence (see page *188*).

SOCIAL SCIENCES

An approved six-hour sequence (see page 188), plus three hours approved social science elective.

Curriculum in Forest Science

For the Degree of Bachelor of Science in Forestry

The curriculum in forest science prepares students for various activities involved in the management of forests and forest lands for wood production and for such other uses as recreation, watershed protection, and wildlife habitat. Graduates are qualified for employment by public agencies or private industry. A minimum of 136 hours of credit (including eight credit hours earned in summer camp) is required for graduation, excluding physical education.

A summer camp of eight weeks is required for all students. This should come between the second and third years. Most of the instruction is given at Camp Rabideau, Blackduck, Minnesota. Estimated costs of $300 include tuition, fees, transportation, meals, and lodging.

FIRST YEAR

FIRST SEMESTER	15 TO 17 HOURS	SECOND SEMESTER	17 HOURS
Agr. 100—Agriculture in Modern Society	1	Chem. 101—General Chemistry[4]	4
Bot. 100—General Botany	4	Econ. 108—Elements of Economics	3
For. 101—General Forestry[1]	3	Math. 114—Plane Trigonometry[2]	2
Math. 111—Algebra, or Math. 112—College Algebra[2]	5 or 3	Speech 112—Verbal Communication[3]	4
Speech 111—Verbal Communication[3]	4	Humanities or Social Sciences[5]	3
Physical Education	(1)	Physical Education	(1)

SECOND YEAR	17 HOURS		16 HOURS
Chem. 102—General Chemistry	4	Physics 102—General Physics (Light, Electricity, and Magnetism)	5
Geol. 101—Physical Geology, or Geol. 105—Agricultural Geology	4	Zool. 104—General Zoology	4
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	Humanities or Social Sciences	6
Humanities or Social Sciences	3	Physical Education	(1)
Physical Education	(1)		

SUMMER CAMP (EIGHT WEEKS)	8 HOURS
For. 211—Forest Ecology	3
For. 221—Introduction to Forest Measurements	3
For. 231—Introduction to Wood Utilization	2

THIRD YEAR	17 HOURS		17 HOURS
Agron. 101—Introduction to Soils	4	For. 222—Advanced Forest Measurements	3
For. 220—Dendrology	4	For. 232—Wood Utilization	3
For. 253—Forest Economics	3	For. 271—Wood Anotomy and Identification	4
For. 340—Introduction to Applied Statistics	3	Geog. 373—Map Compilation	4
Elective[7]	3	Elective[7]	3

FOURTH YEAR	16 TO 18 HOURS		17 HOURS
For. 213—Silviculture	3	For. 242—Forest Resources Management	4
For. 260—Forest Policy and Administration	3	Geog. 378—Descriptive Interpretation of Remote Sensors	4
For. 316—Environment and Tree Growth[6]	4	Plant Path. 304—Forest Tree Diseases and Wood Deterioration	3
For. 362—Forest Entomology	3	Electives[7]	6
Electives[7]	3 or 5		

NOTES

[1] Transfer students with junior standing (sixty hours), or who have completed Forestry Summer Camp, may substitute an elective course for Forestry 101.
[2] Students who pass the algebra portion of the Mathematics Placement Test are exempt from the algebra requirements; for those who pass both the algebra and trigonometry portions of these tests, calculus and analytic geometry (Mathematics 120), is recommended. Mathematics 130 and 131 or 140 and 141 are recommended.
[3] Rhet. 101 and 102 and Speech may be substituted for Speech 111 and 112.
[4] To take Chemistry 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chemistry 100 (2 hours) and have Mathematics 111 or 112 or the equivalent before enrolling in Chemistry 101.
[5] Humanities or social sciences: An approved sequence in the humanities. An approved six-hour sequence and a minimum of nine hours in the social sciences.
[6] Students with an all-University average of 3.5 or over for the first 100 hours may elect another advanced course in place of Forestry 316, provided the substitution is better suited to their particular field of interest. Approval of departmental Courses and Curricula Committee is required.
[7] Students should consult their adviser concerning courses that might be applicable to a specific field of interest or specialization. This is particularly true for those planning to enter graduate college.

HUMANITIES AND SOCIAL SCIENCES

An approved six-hour sequence in the humanities. An approved six-hour sequence and a minimum of nine hours in the social sciences (see pages *188* and *189*).

Curriculum in Wood Science

For the Degree of Bachelor of Science in Forestry

The curriculum in wood science concerns wood as a raw material, including its origin, properties, and characteristics. The approach is interdisciplinary, requiring a knowledge of the chemical, physical, biological, and engineering properties of wood. The curriculum prepares students for positions concerned with using wood in new and better ways; with seasoning, manufacturing, purchase, sale, preservative or fire-retardant treatments, gluing, or with wood finishing. A minimum of ten weeks of non-credit, summer industrial experience with some wood-conversion or wood-using industry is required of all students. This experience usually comes between the junior and senior years. A minimum of 136 hours of credit, excluding physical education and including eight credit hours earned in summer camp, is required for graduation. Estimated costs for summer camp of $300 include tuition, fees, transportation, meals, and lodging.

FIRST YEAR

FIRST SEMESTER	16 TO 17 HOURS	SECOND SEMESTER	17 HOURS
Agr. 100—Agriculture in Modern Society	1	Chem. 101—General Chemistry[3]	4
Bot. 100—General Botany	4	Econ. 108—Elements of Economics	3
For. 101—General Forestry	3	Math. 114—Plane Trigonometry[1]	2
Math. 111—Algebra, or Math. 112—College Algebra[1]	5 or 3	Speech 112—Verbal Communication[2]	4
Speech 111—Verbal Communication[2]	4	Humanities or Social Sciences[4]	3
Physical Education	(1)	Physical Education	(1)

SECOND YEAR	17 TO 18 HOURS		17 HOURS
Chem. 102—General Chemistry	4	Chem. 131—Elementary Organic Chemistry	3
Math. 120—Calculus and Analytic Geometry	5	Chem. 134—Elementary Organic Chemistry Laboratory	2
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	Physics 102—General Physics (Light, Electricity, and Magnetism)	5
Humanities or Social Sciences[4]	3	Humanities or Social Sciences[4]	6
Physical Education	(1)	Physical Education	(1)

SUMMER CAMP (EIGHT WEEKS)	8 HOURS
For. 211—Forest Ecology	3
For. 221—Introduction to Forest Measurements	3
For. 231—Introduction to Wood Utilization	2

THIRD YEAR	16 HOURS		16 HOURS
For. 220—Dendrology	4	For. 232—Wood Utilization	3
G.E. 281—Engineering Influence on Business Decisions	3	For. 271—Wood Anatomy and Identification	4
T.A.M. 171—Elements of Mechanics	3	For. 340—Introduction to Applied Statistics	3
Restricted electives[5]	3	T.A.M. 172—Strength of Materials	3
Open elective	3	Open elective	3

SUMMER INDUSTRIAL EXPERIENCE

A minimum of ten weeks employment preceding the senior year (to be served with some wood-conversion or wood-using industry) is required. The employer will be asked to rate the sudent. The student is required to submit a report of his experience.

FOURTH YEAR	17 TO 18 HOURS		17 HOURS
For. 234—Wood-Moisture Relations	2	For. 273—Adhesives and Laminates	3
For. 253—Forest Economics	3	For. 274—Wood Deterioration and Its Prevention	3
For. 272—Physical and Mechanical Properties of Wood	3	For. 275—Seminar in Wood Science	2
Restricted electives[5]	6 or 7	Restricted elective[5]	3
Open elective	3	Open electives	6

NOTES

[1] Students who pass the algebra portion of the Mathematics Placement Test are exempt from the algebra requirement; those who pass both the algebra and trigonometry portions of these tests may begin their college mathematics with Mathematics 120, Calculus and Analytic Geometry. Mathematics 130 and 140 or 131 and 141 are also recommended.

[2] Rhet. 101 and 102 and Speech 101 may be substituted for Speech 111 and 112.

[3] To take Chemistry 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chemistry 100 (2 hours) and have Mathematics 111 or 112 or the equivalent before enrolling in Chemistry 101.

[4] Humanities or Social Sciences: An approved six-hour sequence in the humanities. An approved six-hour sequence and a minimum of nine hours in the social sciences, including Economics 108.

[5] Subjects to be selected from restricted electives in consultation with adviser.

RESTRICTED ELECTIVES, MINIMUM OF 12 HOURS	HOURS
Accy. 201—Fundamentals of Accounting	3
Bus. Adm. 200—The Legal Environment of Business[2]	3
Bus. Adm. 202—Principles of Marketing	3
Bus. Adm. 210—Production Management and Organization	4
Bus. Adm. 261—Summary of Business Law[2]	3
Bus. Adm. 272—Industrial Selling	3
Chem. 122—Elementary Quantitative Analysis	5
C.E. 369—Behavior and Design of Wood Structures	3
C.S. 101—Introduction to Automatic Digital Computing	3
Fin. 150—Money, Credit, and Banking	3
Fin. 257—Corporation Finance	3
For. 222—Advanced Forest Measurements[1]	3
I.E. 230—Labor Relations[1]	3
I.E. 233—Industrial Quality Control[1]	3
I.E. 357—Safety Engineering	3
L.I.R. 321 (Sec. B)—Industrial Social Systems	3
L.I.R. 347—Labor Law, I[1]	3

Math. 130 or 131—Calculus and Analytic Geometry, or	5 or 3
Math. 140 or 141—Calculus and Analytic Geometry	3 or 5
Math. 345—Differential Equations and Orthogonal Functions	3

NOTES

[1] Given first semester only.
[2] Credit is not given for both Business Administration 200 and 261.

HUMANITIES AND SOCIAL SCIENCES

An approved six-hour sequence in the humanities. An approved six-hour sequence and a minimum of nine hours in the social sciences, including Economics 108 (see pages *188* and *189*).

Curriculum in Ornamental Horticulture

For the Degree of Bachelor of Science in Ornamental Horticulture

This curriculum prepares students for careers in the production, marketing, and use of ornamental crops; in teaching, research, or other related professional activities; or in business serving or related to ornamental horticulture. Opportunities open to graduates are: the production of flowers and ornamental plants in greenhouses and nurseries; plant breeding; flower shop management and floral designing; park and golf course management; sales representatives and technicians with seed and plant suppliers, chemical industries, and horticultural supply firms; employment with state or federal governmental agencies or institutions as teachers, researchers, horticultural advisers, crop inspectors, etc.; consultants; and writers.

Students are required to make at least one inspection trip before graduation. Students are encouraged to acquire practical experience through employment in ornamental horticultural establishments. A minimum of 130 hours of credit, excluding physical education, is required for graduation.

Areas of specialization include Production of Floral Crops; Nursery Management and Production, Use, and Maintenance of Woody Ornamental Crops; Production and Maintenance of Turfgrass; and Flower Shop Management and Floral Designing.

Questions concerning the curriculum and areas of specialization in ornamental horticulture should be directed to 100 Floriculture Building, University of Illinois, Urbana, Illinois 61801.

SAMPLE PROGRAM FOR FIRST TWO YEARS

FIRST YEAR

FIRST SEMESTER	15 TO 18 HOURS	SECOND SEMESTER	17 HOURS
Agr. 100—Agriculture in Modern Society[1]	1	Chem. 101—General Chemistry[4]	4
Bot. 100—General Botany	4	Course from Group I	3
Course from Group I	0 to 3	Entom. 101—Agricultural Entomology	3
Hort. 122—Greenhouse Management	3	Math. 114—Plane Trigonometry[2]	2
Math. 111—Algebra, or Math. 112—College Algebra[2]	3 or 5	Speech 112—Verbal Communication[3]	4
Speech 111—Verbal Communication[3]	4	Physical Education	(1)
Physical Education	(1)		

SECOND YEAR	15 TO 18 HOURS		17 HOURS
Chem. 102—General Chemistry	4	Agron. 101—Introductory Soils	4
Courses from Groups I or II	6	Courses from Groups I or II	6
Geol. 105—Agricultural Geology	4	Econ. 108—Elements of Economics	3
Elective	0 to 3	Elective	3
Physical Education	(1)	Physical Education	(1)

NOTES

[1] An orientation course required of all freshmen in agriculture.
[2] Students in this curriculum are required to complete Mathematics 111 or 112 and 114 unless exempted by the Mathematics Placement Test.
[3] Rhetoric 101, 102, and Speech 101 may be substituted for Speech 111 and 112.
[4] To take Chemistry 101, a student must have a satisfactory score on the Chemistry Placement Test, or take Chemistry 100 (2 hours) and have Mathematics 111 or 112 or equivalent before enrolling in Chemistry 101.

GROUP REQUIREMENTS

GROUP I: HUMANITIES AND SOCIAL SCIENCES	HOURS
An approved six-hour sequence in the humanities and an approved six-hour sequence in the social sciences (in addition to Economics 108)	12

GROUP II: PRESCRIBED HORTICULTURE AND SUPPORTING COURSES		27
Accy. 201—Fundamentals of Accounting[1]	3	
Bot. 260—Introductory Plant Taxonomy	3	
Hort. 210—Home Grounds Planning and Design	4	
Hort. 221—Plant Propagation	3	
Hort. 226—Bedding and Foliage Plants[2]	3	
Hort. 230—Garden Flowers[2]	3	
Land. Arch. 151—Plant Materials, I	3	
Land. Arch. 152—Plant Materials, II	3	
Plant. Path. 204—Introductory Plant Pathology	3	

GROUP III: HORTICULTURE ELECTIVE COURSES		15
A minimum of 15 hours to be chosen with approval of faculty adviser from:		
Hort. 110—Plant and Animal Genetics	3	
Hort. 211—Home Grounds Design and Construction	3	
Hort. 223—Floricultural Crops Production, I[2]	3	
Hort. 224—Floricultural Crops Production, II[2]	3	
Hort. 231—Floral Decorations	3	
Hort. 232—Advanced Floral Decorations and Flower Shop Management[2]	3	
Hort. 234—Nursery Management[2]	3	
Hort. 236—Turf Management	3	
Hort. 242—Vegetable Crops Production[2]	3	
Hort. 251—Arboriculture[2]	3	
Hort. 262—Fruit Science, I[2]	3	
Hort. 300—Special Problems (maximum of 5 hours)	3 to 5	
Hort. 321—Floricultural Physiology	4	
Hort. 322—Plant Nutrition	4	
Hort. 323—Principles of Plant Breeding	4	
Hort. 345—Growth and Development of Horticultural Crops[2]	4	

GROUP IV: AREA OF SPECIALIZATION COURSES		15
A minimum of fifteen hours pertinent to area of specialization to be chosen with approval of faculty adviser from:		
Accy. 108—Intermediate Accounting[3]	3	
Adv. 281—Introduction to Advertising	3	
Agr. Econ. 341—Agricultural Economic Statistics, or Hort. 340—Introduction to Applied Statistics, or Econ. 171—Applied General Statistics, or Math. 161—Statistics	4 or 3	
Agr. Mech. 100—Engineering Applications in Agriculture	3	
Agr. Mech. 112—Tractors and Field Machinery	3	
Agr. Mech. 201—Agricultural Mechanics Shop: Electrical and Metalwork	3	
Agr. Mech. 252—Mechanics of Soil and Water Conservation	3	
Agron. 303—Soil Fertility	3	
Agron. 304—Soil Management and Conservation	3	
Agron. 326—Weeds and Their Control	3	
Bot. 330—Plant Physiology	3	
Bot. 335—Plant Physiology Laboratory	2	
Bot. 345—Plant Anatomy	4	

Bot. 381—Plant Ecology	5
Bus. Adm. 202—Principles of Marketing	3
Bus. Adm. 212—Principles of Retailing	3
Bus. Adm. 249—Human Relations	3
Bus. Adm. 261—Summary of Business Law	3
Bus. Adm. 272—Industrial Selling	3
Entom. 319—Fundamentals of Insect Control	4
Fin. 257—Corporation Finance	3
Fin. 357—Financing Small Business	3
Plant Path. 306—Epiphytology and Diagnosis of Plant Diseases	3
Rhet. 251—Business Writing	3
Rhet. 272—Report Writing	2

NOTES

[1] Accountancy 101 and 105 may be substituted for Accountancy 201.
[2] Offered in alternate years.
[3] Accountancy 101 and 105 are prerequisites for Accountancy 108; credit may not be earned for both Accountancy 101 and 201.

Preveterinary Medical Program

Students applying for admission to the preveterinary program must rank in the upper half of their high school graduating classes. They must maintain at least a 3.5 average to remain in the program.

Students transferring with advanced standing must have maintained at least a 3.5 average in terms of the University's grading system.

A minimum of 3.5 average and sixty semester hours, exclusive of physical education and military science, are required for admission to the College of Veterinary Medicine. However, a scholastic average of 3.5 by itself does not assure admission.

FIRST YEAR

FIRST SEMESTER — 14 OR 15 HOURS		SECOND SEMESTER — 16 OR 17 HOURS	
Biol. 110—Principles of Biology, I	4	Biol. 111—Principles of Biology, II	4
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry	4
Math. 114—Plane Trigonometry, or Math. 104—Elements of Algebra and Trigonometry, or Elective[2]	2 or 3	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	General Education Sequence[3]	4 or 5
Physical Education	(1)	Physical Education	(1)

SECOND YEAR

15 TO 19 HOURS		15 TO 19 HOURS	
Chem. 133—Elementary Organic Chemistry	5	Chem. 122—Elementary Quantitative Analysis	5
Language[4]	4	Language[3]	4
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	Physics 102—General Physics (Light, Electricity, and Magnetism)	5
General Education Sequence[3]	0 to 4	General Education Sequence[3]	0 to 4
Physical Education	(1)	Physical Education	(1)

NOTES

[1] Students who do not earn a satisfactory score on the Chemistry Placement Test must take Chemistry 100 before enrolling in Chemistry 101. Also, it should be noted that the prerequisite for Chemistry 101 is Mathematics 111 or 112 (College Algebra), or exemption from Mathematics 112 on the Mathematics Placement Test. Students who do not satisfy both of these requirements must delay Chemistry 101 until the second semester, and then attend a summer session to complete all preveterinary requirements in two years.
[2] Students who have at least one-half unit in high school trigonometry are not required to take trigonometry. Such students should select a three- or four-hour course from the General Education sequence for their first semester.
[3] All students are required to complete an approved six-hour sequence in the humanities and an approved six-hour sequence in the social sciences. See below.

[4] The foreign language requirement may be fulfilled by three years of one foreign language from an accredited high school. Completion of a language 102 course or exemption therefrom on the Language Placement Test will also satisfy the foreign language requirement.

Students who take no mathematics, or no foreign language (by virtue of exemption based on high school credits), will need additional hours from the general education sequences, or from free electives, to bring their total hours to sixty.

GENERAL EDUCATION SEQUENCES FOR BACHELOR'S DEGREE IN VETERINARY MEDICINE

All students entering the University after June, 1964, are required to complete six hours of sequence courses in each of three areas (natural sciences, humanities, and social sciences) in order to be awarded a B.S. degree.

NATURAL SCIENCES

The requirements will be satisfied upon successful completion of the preveterinary curriculum.

HUMANITIES

Students must complete one six-hour sequence from the following:

Art—6 hours from the following courses: 111, 112, 115, 116, 211.
English and American Literature—6 hours from any courses at the 100 or 200 level.
History—6 hours selected from the following courses: 131, 132, 191, 192.
Humanities—151 and 152, 211 and 212, 215 and 216.
Literature in Foreign Languages—6 hours from 103, 104, or any 200-level literature courses in foreign languages.
Music—6 hours from the following courses: 113, 115, 130, 131, 213, 214.
Philosophy—6 hours from the following courses: 101, 102, 105, 110.
Speech and Theatre—177, 178.

SOCIAL SCIENCES

Students must complete one six-hour sequence from the following:

Anthropology—6 hours from the following courses: 102, 103, 260, 270.
Economics—6 hours from: 102 or 108, 103, 214, 228, 236, 238, 240, 255, 288, or Economics 108 and one of the following: Geography 105, Political Science 150, Psychology 100, Psychology 103.
Geography—6 hours from: 101, 104, 105, 210.
History—6 hours from the following courses: 111, 112, 131, 132, 151, 152, 181, 182, 211, 212, 260, 261, 262.
Political Science—6 hours from: 150, 151, 184, 191, 241, 263.
Psychology—6 hours from: 100 or 103, 150 or 250, 201.
Sociology—6 hours from: 100, 131, 151, 152, 212, 218, 221, 223, 225, 228, 229, 275, 276, 277.

Curriculum in Restaurant Management

For the Degree of Bachelor of Science in Restaurant Management

The curriculum in restaurant management prepares students (both men and women) for managerial positions in restaurants and other commercial food service units. It also gives them basic training for work as purchasing agents, kitchen equipment and layout specialists, food inspectors, and other allied occupations. A total of 126 hours of credit, exclusive of physical education, is required for graduation.

Two one-day field trips are required: (1) orientation to metropolitan restaurants, fall; and (2) National Restaurant Association annual meeting, spring. Estimated cost: $15 each trip.

Two summers (a minimum of eight weeks each), or equivalent, of practical restaurant experience are required and must be completed before registering in Home Economics 355. This experience normally should come at the end of the second and third years.

FIRST YEAR FIRST SEMESTER	17 OR 16 HOURS	SECOND SEMESTER	17 HOURS
Accy. 101—Principles of Accounting, I.	3	Accy. 105—Principles of Accounting, II.	3
Agr. 100—Agriculture in Modern Society	1	Chem. 101—General Chemistry[3]	3
Math. 111—Algebra, or Math. 112—College Algebra[1]	5 or 3	Soc. 100—Principles of Sociology	3
Psych. 100—Introduction to Psychology, or Psych. 103—Human Behavior	4	Speech 112—Verbal Communication[2]	4
Speech 111—Verbal Communication[2]	4	Electives	2
Physical Education	(1)	Physical Education	(1)
SECOND YEAR	**17 HOURS**		**17 HOURS**
American or English Literature	3	American or English Literature	3
Chem. 102—General Chemistry	4	Physiology 103—Introduction to Human Physiology	4
Econ. 108—Elements of Economics	3	Electives	9
Home Econ. 132—Foods and Nutrition.	3	Physical Education	(1)
Electives	3		
Physical Education	(1)		
THIRD YEAR	**15 OR 16 HOURS**		**17 HOURS**
An. Sci. 104—Selection and Use of Meats, or Elective[4]	2 or 3	Bus. Adm. 202—Principles of Marketing	3
Econ. 240—Labor Problems	3	Bus. Adm. 210—Production Management and Organization, or Bus. Adm. 247—Introduction to Management	3 or 4
Home Econ. 160—The Home and Its Furnishings,[5] or Elective	4	Home Econ. 240—Quantity Food Production and Service	5
Home Econ. 220—Principles of Nutrition	3	Microbiol. 100—Introduction to Microbiology	3
Home Econ. 231—Foods	3	Microbiol. 101—Introduction to Experimental Microbiology	2
FOURTH YEAR	**16 HOURS**		**16 OR 17 HOURS**
An. Sci. 104—Selection and Use of Meats, or Elective[4]	2	Bus. Adm. 261—Summary of Business Law	3
Bus. Adm. 249—Human Relations	3	Home Econ. 350—Institution and Restaurant Management: Organization and Administration	4
Home Econ. 160—The Home and Its Furnishings,[5] or Elective	4	Home Econ. 355—Specialized Quantity Food Production and Management	3
Home Econ. 345—Institution and Restaurant Management: Food Purchasing and Equipment Selection	3	Rhet. 251—Business Writing	3
Electives	4	Electives	3

NOTES

[1] Students who make a satisfactory score on the Mathematics Placement Test are exempt from Mathematics 111 and 112.
[2] Rhetoric 101, 102, and Speech 101 may be taken instead of Speech 111 and 112.
[3] Students who do not make a satisfactory score on the Chemistry Placement Test must take Chemistry 100 and have Mathematics 111 or 112 or equivalent before Chemistry 101.
[4] Animal Science 104, offered first semester in alternate years.
[5] Special section for Restaurant Management, offered first semester in alternate years.

Curriculum in Home Economics

For the Degree of Bachelor of Science in Home Economics

This four-year curriculum is provided for students in the College of Agriculture who desire general or professional training in home economics. The 120 hours required for graduation include prescribed courses of which at least twenty-eight hours must be in home economics courses selected according to the requirements for the various options (see below).

The first two years of this curriculum, shown in detail on pages 225 and 226, provide a foundation for the various fields of concentration, and allow some variation according to the purposes of individual students. The third and fourth years are largely determined by the option selected (these are described below). Students who hold home economics scholarships must take at least four hours each semester in home economics or in courses prerequisite thereto. At least five hours of advanced courses in one of the fields of concentration must be taken in residence at the University by any student transferring from another institution.

A student may also qualify for a baccalaureate degree in home economics in the College of Liberal Arts and Sciences (page 370).

PRESCRIBED COURSES

	HOURS
American or English Literature	6
Art 185[1]	2
Chem. 101[2] and 102	8
Econ. 108	3
Home Econ. 100[3]	0
Fourteen hours from: Home Economics 105, 132, 133, 160, 171, 183, and 184[4]	14
Advanced Home Economics	14 to 25
Math. 111 or 112	3 or 5
Microbiol. 100 and 101[5]	5
Physical Education (four semesters)	0
Physiol. 103[5]	4
Psych. 100 or 103	4
Rhet. 101 and 102	6
Sociol. 100	3
Total, Prescribed	72 to 85
Open Electives	35 to 48
Total Required for Graduation	120

NOTES

[1] Students in Option 1 need not take Art 185 but do take the art courses prescribed under that option.

[2] Students who do not make a satisfactory score on the Chemistry Placement Examination must take Chemistry 100 and have Mathematics 111 or 112 or equivalent before registering for Chemistry 101.

[3] Required of freshmen entering the department during the summer session or fall semester.

[4] See below for courses required in specific options.

[5] Students in Options 1 and 8 are not required to take the prescribed microbiology and physiology courses, but they must take a total of twelve hours of laboratory sciences, including Chemistry 101 and 102, and four hours to be chosen from courses in botany, geology, microbiology, organic chemistry, physiology, or zoology.

Students select one of the following nine options:

1. **Apparel Design.** Home Economics 182, 183, 184, 284, 285, 286, 287, 386, and 395 are required. (Art 115 or 116, 117, 118, 119, 120, 125 and 129; Economics 313; Rhetoric 251; Speech 101 and a course in applied statistics[1] are also required.)

2. **The Child and the Family.** Home Economics 105, 202, 203, 210, 301, and 349 are required. (Anthropology 103 and six additional hours of social sciences[2] are also required.)

3. **Foods and Nutrition.** Home Economics 132, 133, 220, 231, 324 (3 or 5 hours), and 330 are required. Two or three hours to make a total of fourteen or fifteen hours are to be selected from Home Economics 240, 320, 322, and 331. (Chemistry 122, 133, Biochemistry 354 or 350 and 355, and Mathematics 114 are also required.)

4. **General Home Economics.** Fifteen hours are to be selected from home economics courses numbered in the 200 and 300 series. At least two courses must be at the 300 level. (Six additional hours of social sciences[2] are also required.)

4a. **Foods in Business Program.** Home Economics 132, 133, 220, 231, and 330 are required. Six additional hours are to be selected from Home Economics 326, 331, and 375. Business Administration 202, Journalism 211, Rhetoric 251, and Speech 101 are re-

quired, and an additional twelve hours are to be selected from Advertising 281, 382; Business Administration 247; Home Economics 240, 313, 322, 370; Journalism 223, 326; Radio-Television 261, Speech 211; and applied statistics.

5. **Hospital Dietetics.** Home Economics 132, 133, 220, 231, 240, 320, 324, 345, 350, and three hours from Home Economics 330, 355, and Accountancy 201 are required. Chemistry 122, 133, Biochemistry 354 or 350 and 355; Education 211; and Business Administration 249 are also required.

6. **Household Management.** Home Economics 132, 133, 171, 270, 273, and 361 or 375 are required. Six additional hours are to be selected from Home Economics 210, 220, 231, 260, 262, 330, 361, 375, 378 or 379, and 380. (Six additional hours of social sciences[2] are also required.)

7. **Institution Management.** Home Economics 132, 133, 220, 231, 240, 330, 345, 350, and 355 are required. (Accountancy 101 and 105; Business Administration 249; and Speech 101 are also required.)

8. **Retailing of Clothing and Home Furnishings.** Home Economics 160 or 184, 182, 183, and 395 are required. Eleven hours are to be selected from Home Economics 260, 262, 263, 280, 281, 284, 285, 286, 287, 361, 378, 380, 386 and 388. Advertising 281; Art 115, or 116, 186; Business Administration 202, 211; Economics 313; Psychology 201; Rhetoric 251; Speech 101 and a course in applied statistics[1] are required.

9. **Textiles and Clothing.** Home Economics 182, 183, and 184 are required. Fourteen or fifteen additional hours must be selected from Home Economics 280, 281, 284, 285, 286, 287, 380, 386, 388 or 395. (Art 186 and six additional hours of social sciences[2] are also required.)

Journalism and Home Economics. For students interested in combining advertising, journalism, and radio-television with home economics, a program of twenty hours in courses offered by the College of Comunications is recommended by that college and the Department of Home Economics. This program may be combined with any of the nine options in home economics. It includes Advertising 281—Introduction to Advertising, Journalism 211—Newswriting, and Radio-Television 261—Principles of Radio and Television Broadcasting, as required courses plus twelve additional hours selected from Advertising 382—Advertising Creative Strategy, Journalism 204—Typography, Journalism 212—Public Affairs Reporting, Journalism 223—Photo-Journalism, Journalism 321—News Editing, Journalism 323—Advanced Reporting, Journalism 326—Magazine Article Writing, Journalism 330—Magazine Editing, Business Administration 202—Principles of Marketing, Radio-Television 263—Radio and Television Announcing, Radio-Television 365—Radio News.

NOTES

[1] To be selected from Economics 171, Psychology 135, or Sociology 185.
[2] To be selected from anthropology, economics, history, philosophy, political science, psychology, or sociology, in addition to Economics 108, Psychology 100 or 103, and Sociology 100.

Students preparing to teach home economics in secondary schools should follow the curriculum in home economics education (see page 226).

SUGGESTED SEQUENCE OF PRESCRIBED COURSES

FIRST YEAR

FIRST SEMESTER	15 TO 17 HOURS	SECOND SEMESTER	15 TO 17 HOURS
Home Econ. 100—Orientation to Home Economics	0	Art. 185—Design[3]	2
Home Econ. core course(s)[1]	4	Chem. 101—General Chemistry	4
Moth. 111—Algebra, or Math. 112—College Algebra	5 or 3	Home Econ. core course(s)[1]	3 or 4
Physiol. 103—Introduction to Human Physiology[2]	4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Elective	3
Physical Education	(1)	Physical Education	(1)

SECOND YEAR	15 HOURS	15 TO 17 HOURS
American or English Literature	3	3
Chem. 102—General Chemistry[2]	4	3
Home Econ. core course(s)[1]	4	2 or 3
Psych. 100—Introduction to Psychology, or Psych. 103—Human Behavior	4	3
Microbiol. 100—Introductory Microbiology[2]		3
Microbiol. 101—Introductory Experimental Microbiology[2]		2
Elective		2 or 3
Physical Education	(1)	(1)

THIRD AND FOURTH YEARS

In the third and fourth years each student completes the prescribed courses in the chosen options. Those who choose Option 3 should take Chemistry 122 and Home Economics 231 in the first semester of the third year.

NOTES

[1] Fourteen hours from Home Economics 105, 132, 133, 160, 171, 183, 184.
[2] Students in Options 1 and 8 are not required to take the prescribed microbiology and physiology courses, but they must take a total of twelve hours of laboratory sciences, including Chemistry 101 and 102, and four hours to be chosen from twelve courses in botany, geology, microbiology, organic chemistry, physiology, or zoology.
[3] Students in Option 1 need not take Art 185 but do take the art courses prescribed under that option (see page 224).

Curriculum in Vocational Home Economics Education

For the Degree of Bachelor of Science in Home Economics Education

The purpose of this curriculum is to prepare young women to teach home economics in junior and senior high schools. Secondary school courses taught include composite courses in general homemaking and courses in foods and nutrition, clothing and textiles, home and family living, and home management and housing.

A minimum of 126 hours of credit, exclusive of physical education, is required. A teaching minor is not required, but those desiring a teaching minor should consult their adviser.

The arrangement of courses below is recommended. With the approval of their advisers, students may take courses at another time.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR FIRST SEMESTER	16 OR 18 HOURS	SECOND SEMESTER	15 HOURS
Art 185—Design	2	Art 186—Design	2
Home Econ. 100—Orientation to Home Economics	0	Chem. 101—General Chemistry[3]	4
Home Econ. 160—The Home and Its Furnishings	4	Home Econ. 183—Consumer Textiles	2
Home Econ. 171—Home Management	2	Home Econ. 184—Clothing Selection	2
Math. 111 or 112—Algebra[1]	5 or 3	Speech 112—Verbal Communication[2]	4
Speech 111—Verbal Communication[2]	4	Physical Education	(1)
Physical Education	(1)		

SECOND YEAR	16 HOURS	17 or 18 HOURS
Chem. 102—General Chemistry	4	Econ. 108—Elements of Economics[4] 3 or 4
Home Econ. 132—Foods and Nutrition	3	Home Econ. 105—Child and Family 4
Home Econ. 182—Clothing Laboratory	2	Home Econ. 133—Food Management 2
Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4	Physiol. 103—Introduction to Human Physiology 4
Vo. Tech. Ed. 101—Nature of the Teaching Profession	2	Physical Education (1)
Physical Education	(1)	Humanities Elective from Approved Sequence[5] 3

THIRD YEAR	15 TO 17 HOURS	15 TO 17 HOURS
Home Econ. 202—Laboratory in Child Development	2	
Home Econ. 231—Foods	3	
Home Economics 300-level Course,[6] or Elective	2 to 4	
Microbiol. 100—Introductory Microbiology	3	
Microbiol. 101—Introductory Experimental Microbiology	2	
Humanities Elective from Approved Sequence[5]	3	
Hist. Phil. Ed. 201—Foundations of American Education		2
Home Econ. 210—Family Relationships		3
Home Econ. 220—Principles of Nutrition		3
Home Econ. 286—Clothing Design—Flat Pattern		3
Home Economics 300-level Course,[6] or Home Management Elective[7]		2 to 4
Vo. Tech. Ed. 240—Principles of Vocational and Technicol Education		2

Semesters in the fourth year are interchangeable.

FOURTH YEAR	15 TO 17 HOURS	17 HOURS
Home Econ. 273—Home Management	3	
Home Economics 300-level Course,[6] or Home Management Elective,[7] or Open Elective	2 to 4	
Pol. Sci. 150—American Government: Organization and Powers	3	
Electives	7	
Hist. 261—The First Century of the American Republic[8]		3
Ed. Prac. 242—Educational Practice in Secondary Education		5
Ed. Psych. 211—Educational Psychology		3
Sec. Ed. 241—Technic of Teaching in the Secondary School		3
Vo. Tech. Ed. 278—Vocational Education in Home Economics for Adults		3

NOTES

[1] Students in this curriculum are required to complete Mathematics 111 or 112 or pass the Mathematics Placement Test. Those who pass the placement test are exempt from the mathematics requirement.
[2] Rhetoric 101, 102, and Speech 101 may be taken instead of Speech 111 and 112.
[3] Students must have a satisfactory score on the Chemistry Placement Test or start with Chemistry 100 and have Mathematics 111 or 112 or equivalent.
[4] Section designated for teachers is recommended.
[5] See pages 188 and 189.
[6] Chosen from Home Economics 301, 322, 330, 380, or 386.
[7] Chosen from Home Economics 260, 270, 361, or 375.
[8] This requirement may also be satisfied by History 151, 152, or 262.

Teacher Education Minor in Home Economics

	HOURS
Home Econ. 105—Child and Family	4
Home Econ. 120—Elementary Nutrition, and Home Econ. 125—Food Selection and Preparation; or Home Econ. 132—Foods and Nutrition, and Home Econ. 133—Food Management	5
Credit is not given for Home Economics 132 and 133 in addition to 120 and 125.	
Home Econ. 160—The Home and Its Furnishings	4
Home Econ. 171—Home Management, or Home Econ. 271—Home Management	2
Home Econ. 182—Clothing Laboratory	2
Home Econ. 183—Consumer Textiles	2
Home Econ. 184—Clothing Selection	2
Art 185 must be taken prior to, or concurrently with, this course.	
Two or three hours from the following courses:	
Home Econ. 202—Laboratory in Child Development	2
Home Econ. 210—Family Relationships	3
Home Econ. 231—Foods	3
Home Econ. 270—Family Financial Management	3
Home Econ. 280—Household Textiles	2
Home Econ. 287—Consumer Clothing Problems	2
Total	24

The University of Illinois-Willard Airport serves the community and provides facilities for aviation education and research.

Institute of Aviation

The Institute of Aviation is the administrative agency responsible for the promotion and correlation of the education and research activities related to aviation in all parts of the University. Its cooperative relationships extend into all departments, and its administration is under a director who has the advice and assistance of an executive committee. The Institute holds Federal Aviation Administration (F.A.A.) Airman Examining (Pilot) Agency Certificate No. 1, which permits it to issue pilot certificates and ratings to its graduates on behalf of the F.A.A. Pilot training includes training from the Private Pilot level to the Airline Transport Pilot. The advanced students have the opportunity of flying with our staff transport pilots as observers and in some cases as co-pilots.

The Institute has a two-year aircraft maintenance curriculum on the college level which is designed to prepare students for the F.A.A. mechanic certificate with airframe and powerplant ratings and the private pilot certificate.

For the student who is interested in becoming a professional pilot, two avenues are open. First, the combined maintenance-flight curriculum, the most popular option, provides for the addition of a flight course to each of the last three semesters of the aircraft maintenance curriculum, enabling the student to qualify for the commercial certificate. The student may elect to take additional flight courses during the summer sessions following each of the two years in the curriculum, thereby qualifying for the instructor, the instrument, and the multi-engine ratings. The second avenue, the professional pilot curriculum, combines flight courses with general subjects. In four semesters, the student may earn approximately fifty hours of University credit in general subjects in addition to the four flight courses required for the commercial certificate. The same arrangements for obtaining additional ratings by attending summer school are available as in the flight-maintenance curriculum.

An aviation electronics curriculum is also offered by the Institute. This two-year course prepares students for a certificate of completion in electronic technology and an advanced F.C.C. Radio-Telephone license. The

curriculum contains both technical and liberal arts courses. The private pilot course, which can be taken during either the first or second year, is an integral part of the program.

New freshmen whose primary interest is in aircraft maintenance or aviation electronics are normally accepted for admission only in September. However, if the student's aim is to become a professional pilot, he may begin with the spring semester, expecting to continue for a fifth semester to complete the entire curriculum. Students who are enrolled in another department of the University may transfer to any curriculum in the Institute of Aviation beginning with the second semester, with the understanding that five semesters may be required to complete the curriculum.

Students wishing to secure a degree may, upon the successful completion of their two years of work in the Institute, transfer to any of the degree-granting divisions of the University and complete the requirements for a degree in that division. A minimum of two and one-half additional years is usually necessary to obtain the degree. A student enrolled in any other division of the University may elect flight courses with the permission of his own department, to the extent that space in the Institute courses is available.

A special fee of $550 is charged for each course involving flight training in addition to the estimated costs listed on page 131.

The Institute's Aviation Research Laboratory conducts interdisciplinary research in the areas of pilot flight display and control systems; selection, training, performance, prediction, and assessment; human engineering; air traffic control; flight simulation; and flight display and control systems. This laboratory is directed by the Associate Director for Research who holds joint professorships in the Department of Psychology and the Department of Aeronautical and Astronautical Engineering. This unique arrangement makes it possible for graduate students in various departments to perform thesis research and to participate in other research activities at the laboratory as graduate research assistants.

The Institute, in addition to its instructional program, publication activities, and aeronautical research, is responsible for the management of the University of Illinois–Willard Airport, which is owned and operated by the University. The Airport, with an area of 1,298 acres, is located just off U.S. Route 45, six miles southwest of the Urbana campus. Its purpose is to implement a comprehensive program of aviaton education and research and to provide commercial and private landing facilities for the promotion of national air transport and defense. The Airport provides the University and the community with excellent air transportation terminal facilities and also makes possible military aviation training activities. It gives students an opportunity to engage in flying activities, both as part of general education and in connection with professional objectives. The administration, operation, and servicing activities of the Airport furnish students and faculty with an opportunity for laboratory study and research.

The land and rights-of-way for the Airport were purchased by the University with funds appropriated by the General Assembly of Illinois. The present completed facilities, financed by the Federal Aviation Administration through federal funds and by the Department of Aeronautics of the

state of Illinois through state funds, consist of three concrete runways, one 6,500 and two 5,300 feet long, and all 150 feet wide; a total of 13,850 feet of concrete taxiways 50 feet wide; 489,220 square feet of ramp space; and 89,000 feet of drainage. The larger hangar, 360 by 100 feet, provides space for storage and shop activities. Attached to the hangar and covering an area of 17,175 square feet are classrooms, operations offices, public rooms, storage and stock rooms, and service utilities. An additional hangar, 90 by 100 feet, was constructed in 1960 and is leased for business aircraft use. A new hangar for University flight activities, 150 by 150 feet, was erected in 1967. An additional hangar for business aircraft was erected also in 1967. T-hangars provide additional space for thirty-two airplanes. Eight quonset-type buildings with a combined floor area of over 47,400 square feet provide space for research and other educational activities carried on by various departments of the University. The night-lighting installation, the instrument landing system, and the VORTAC radio navigation system all help to make the Airport modern and useful for both educational and commercial purposes.

A terminal building and an F.A.A. Combined Station/Tower were constructed at the Airport in 1958–1959. The Combined Station/Tower is, since November, 1969, an Air Traffic Control Tower. These buildings provide attractive public facilities for airline travelers and housing for the most up-to-date equipment for safe air traffic control.

REQUIREMENTS FOR ADMISSION

All admissions to the University of Illinois are handled by the Director of Admissions and Records. Requirements for admission to the Institute of Aviation are as follows:

1. An applicant must have graduated from an accredited high school with a minimum of fifteen acceptable units.
2. Ten of the fifteen units must satisfy Pattern I of the University admission requirements, as follows:

	UNITS
English	3
Mathematics	
Algebra	1
Plane Geometry	1
One or more units in at least three of the following:	
One additional unit in English, two units in one foreign language, science (not general science), social studies, additional mathematics (beyond algebra and plane geometry).	5

Additional units in physics, mathematics, and social studies are recommended. Applicants for the aviation electronics curriculum should have an additional unit of algebra and a half unit of trigonometry.

Anyone who does not have the subjects required for admission to the Institute may take entrance examinations prior to admission. Information concerning these examinations can be obtained from the Office of Admissions and Records, 100a Administration Building, Urbana, Illinois 61801.

Courses offered by the Institute of Aviation are open to students and to faculty and staff in all departments of the University, subject to limitations imposed by the availability of space and equipment.

Aircraft Maintenance Curriculum

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	19 HOURS
Avi. 151—Applied Aircraft Physics	3	Avi. 150—Aircraft Engine Overhaul	3
Avi. 153—Aircraft Shop Practice, or Avi. 101—Private Pilot	3	Avi. 152—Aircraft Engine and Accessory Overhaul	3
Avi. 157—Aircraft Engine Theory and Practice	6	Avi. 153—Aircraft Shop Practice, or Avi. 101—Private Pilot	3
Rhet. 101—Rhetoric and Composition	3	Avi. 154—Aircraft Propellers	3
Physical Education	1	Avi. 155—Aircraft Mathematics	3
		G.E. 105—Elements of Drawing	3
		Physical Education	1

SECOND YEAR	16 HOURS		17 HOURS
Avi. 161—Aircraft Shop Management	3	Avi. 158—Aircraft Overhaul	3
Avi. 163—Aircraft Structural Materials	2	Avi. 160—Aircraft Rigging and Assembly	2
Avi. 165—Aircraft Structural Repair	3	Avi. 162—Aircraft Systems and Appliances	3
Avi. 167—Aircraft Fabricating Processes	2	Avi. 168—Problems of Aircraft Maintenance	2
Avi. 171—Nonstructural Aircraft Materials	3	Avi. 170—Aircraft Electrical Systems and Components	3
Avi. 173—Aircraft Radio and Instruments	2	Avi. 230—Nondestructive Inspection Methods	3
Physical Education	1	Physical Education	1

Combined Maintenance-Flight Curriculum[1]

FIRST YEAR

FIRST SEMESTER	19 HOURS	SECOND SEMESTER	19 HOURS
Avi. 101—Private Pilot	3	Avi. 120—Secondary Flight	3
Avi. 151—Applied Aircraft Physics	3	Avi. 150—Aircraft Engine Overhaul	3
Avi. 153—Aircraft Shop Practice	3	Avi. 152—Aircraft Engine and Accessory Overhaul	3
Avi. 157—Aircraft Engine Theory and Practice	6	Avi. 154—Aircraft Propellers	3
Rhet. 101—Rhetoric and Composition	3	Avi. 155—Aircraft Mathematics	3
Physical Education	1	G.E. 105—Elements of Drawing	3
		Physical Education	1

SECOND YEAR	19 HOURS		20 HOURS
Avi. 130—Intermediate Flight[2]	3	Avi. 140—Advanced Flight[2]	3
Avi. 161—Aircraft Shop Management	3	Avi. 158—Aircraft Overhaul	3
Avi. 163—Aircraft Structural Materials	2	Avi. 160—Aircraft Rigging and Assembly	2
Avi. 165—Aircraft Structural Repair	3	Avi. 162—Aircraft Systems and Appliances	3
Avi. 167—Aircraft Fabricating Processes	2	Avi. 168—Problems of Aircraft Maintenance	2
Avi. 171—Nonstructural Aircraft Materials	3	Avi. 170—Aircraft Electrical Systems and Components	3
Avi. 173—Aircraft Radio and Instruments	2	Avi. 230—Nondestructive Inspection Methods	3
Physical Education	1	Physical Education	1

NOTES

[1] Students register in aircraft maintenance curriculum.

[2] Students may take Aviation 130 and 140 in the summer session following the first year of the curriculum, in which case they are free to elect advanced flight courses (Aviation 200, 210, 220, 250, 280) in the second year of the curriculum and in the following summer session. Such programs are planned on an individual basis.

Professional Pilots Curriculum

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	16 HOURS
Avi. 101—Private Pilot	3	Avi. 120—Secondary Flight	3
Biol. 100—Biological Science, or L.A.S. 141—Physical Science	4	Biol. 101—Biological Science, or L.A.S. 142—Physical Science	4
Hist. 111—History of Civilization	4	Hist. 112—History of Civilization	4
Speech 111—Verbal Communication	4	Speech 112—Verbal Communication	4
Physical Education	1	Physical Education	1
SECOND YEAR	**16 HOURS**		**16 HOURS**
Avi. 130—Intermediate Flight[1]	3	Avi. 140—Advanced Flight[1]	3
Biol. 100—Biological Science, or L.A.S. 141—Physical Science	4	Biol. 101—Biological Science, or L.A.S. 142—Physical Science	4
Sociol. 151—Social Science	4	Sociol. 152—Social Science	4
L.A.S. 161—Literature and Fine Arts	4	L.A.S. 162—Literature and Fine Arts	4
Physical Education	1	Physical Education	1

NOTES

[1] Professional pilot students may take Aviation 130 and 140 in the summer following the first year of the curriculum, in which case they are free to elect advanced flight courses (Aviation 200, 210, 220, 250, 280) in the second year of the curriculum and in the following summer session. Such programs are planned on an individual basis.

Aviation orientation (Aviation 100) and recreational courses (Aviation 105, 115) are offered every semester.

Aviation Electronics Curriculum

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	14 HOURS
Avi. 181—Introduction to Electronic Theory and Practices	3	Avi. 182—Basic Electronic Theory	3
G.E. 101—Engineering Graphical Communication	3	G.E. 212—Graphical Calculations	1
Math. 123—Analytic Geometry	5	Math. 132—Calculus	5
Speech 111—Verbal Communication	4	Physics 106—General Physics (Mechanics)	4
Physical Education	1	Physical Education	1
SECOND YEAR[1]	**16 HOURS**		**14 HOURS**
Avi. 183—Advanced Electronic Theory	3	Avi. 184—Aircraft Navigation and Communications Systems	5
Avi. 185—Aircraft Electrical Systems	5	Avi. 186—F.A.A. and F.C.C. Regulations	3
Math. 142—Calculus	3	Avi. 188—Aircraft Instrumentation	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Rhet. 272—Report Writing	2
Physical Education	1	Physical Education	1

NOTES

[1] Aviation 101 must be taken sometime during the first or second year.

Commerce West—This building and David Kinley Hall house the College of Commerce and Business Administration.

College of Commerce and Business Administration

The purpose of the College of Commerce and Business Administration is to provide educational experience that will help students develop their potentialities for leadership and service in business, in government, and in teaching and research. The undergraduate curriculum provides a study of the basic aspects of business and preparation for careers in fields such as accounting, business management, banking, insurance, and marketing. Students should, however, expect to serve an apprenticeship in the fields they enter if they aspire to higher positions.

The curriculum, leading to the Bachelor of Science degree in one of the various degree programs in business and economics, is based on four years of college work. Students are required to elect courses in other colleges of the University including mathematics, rhetoric, literature, speech, and social science and to secure as liberal an education as possible to avoid the narrowing effects of overspecialization. Through a cooperative arrangement with the Division of Social Sciences, students in the College of Liberal Arts and Sciences may major in economics or finance.

Instruction is organized under the Departments of Accountancy, Business Administration, Economics, and Finance.

GRADUATE PROGRAMS

The college offers graduate and professional programs to students with a bachelor's degree in one of the areas of business and economics, or in a non-business area such as liberal arts, science, or engineering. Detailed information on graduate programs may be obtained from the Graduate College and Graduate School of Business Administration catalogs.

REQUIREMENTS FOR GRADUATION

Students in the College of Commerce and Business Administration who meet the University's requirements with reference to registration, residence, and fees, and who maintain satisfactory scholastic records in the college, are awarded degrees appropriate to their curricula. Each curriculum requires a minimum of 124 semester hours of credit, excluding physical education.

Each candidate for a degree must have a 3.0 average or above for all courses counted toward graduation, a 3.0 average or above for all courses taken at this University,

and a 3.0 average or above for all courses taken in the field of concentration. Basic military, physical education, and religion grades are not counted in the graduation average.

Each student may select only one major field of concentration.

Continuing students advance enroll for the following semester in November and April of each academic year. New students may advance enroll during the summer for each fall semester. Information may be obtained at the Office of Admissions and Records.

Faculty advisers are available *during the registration period* each semester to help students plan their academic programs.

Students are responsible for meeting the requirements for graduation. Therefore, each student should familiarize himself with the requirements listed in this catalog and should refer to them each time he plans his program.

HONORS PROGRAMS

James Scholar Program. Superior high school students are invited to participate in the James Scholar Program in the College of Commerce and Business Administration by the University Faculty Honors Council. Invitations to the James Scholar Program are extended also by the college to continuing and superior transfer students with a University of Illinois grade-point average of 4.25 or higher. Members of the James Scholar Program participate in honors sections of required courses and in special departmental seminars and colloquia. Special advising arrangements provide opportunities for advanced placement and encourage creative and independent study.

Dean's List. At the end of each semester the Dean's List is announced, naming those students who have achieved a 4.0 average or above.

Superior academic achievement is recognized in other ways by the University through the *Honors Day Convocation* and the *Bronze Tablet.*

Further information concerning Honors Programs may be obtained from the college *Undergraduate Programs* catalog or by writing to the Undergraduate Office, College of Commerce and Business Administration, 214 David Kinley Hall, Urbana, Illinois 61801.

HONORS AT GRADUATION

Honors awarded to superior students at graduation are designated on the diploma as follows:

1. For graduation with Honors, a minimum 4.25 grade-point average in all courses accepted toward the student's degree.
2. For graduation with High Honors, a minimum 4.5 grade-point average in all courses accepted toward his degree.
3. For graduation with Highest Honors, a minimum 4.75 grade-point average in all courses accepted toward his degree.

REQUIREMENTS FOR ADMISSION

The entrance requirements to the College of Commerce and Business Administration are English, three units; algebra, two units; plane geometry, one unit; laboratory science, two units; social science, two units; and foreign language, two units. The foreign language units must be in the same language. General science may not be used as a required science subject.

Students transferring from other colleges will not be excused from the above entrance requirements unless they have demonstratd proficiency in the areas in which they are deficient.

MATHEMATICS PLACEMENT TEST

Students without college credit in algebra are required to take the Mathematics Placement Test before registering in the college. The results of the Test are used to place the student in Mathematics 111 or 112 for no credit or to exempt him from college algebra and allow him to enroll in Mathematics 124 or equivalent which is required for graduation.

The student who enters with college credit in algebra may proceed directly to courses beyond college algebra required by the college for graduation.

Curricula

Normally students must register for not less than twelve hours (excluding physical education and religion courses) nor more than eighteen hours (including physical education and religion courses) in each semester. Students should take specifically required courses in the semesters indicated in the Sample Schedule of Courses, page 238. A required course which is failed must be repeated the following semester.

In addition to the requirements for graduation listed below, students are required to earn one hour of credit in physical education in each of the first four semesters. Physical education grades are not counted in the graduation average. The following requirements apply to all curricula.

A. UNIVERSITY REQUIREMENTS	HOURS
Rhetoric 101, 102—Rhetoric and Composition[1]	6
Physical Education, four semester hours	0
B. GENERAL EDUCATION REQUIREMENTS	
Computer Science 105	3
Mathematics 124, 134—Introductory Analysis for Social Studies[2]	7
Advanced Rhetoric	3
Speech 101—Principles of Effective Speaking	3
General Education Sequences[3]:	
List 1—Foreign Language, Humanities, Mathematics, Natural Science	8
List 2—Behavioral Science	7
List 3—History or Political Science	6
List 4—Literature	6
C. BUSINESS CORE REQUIREMENTS	
Accountancy 101, 105—Principles of Accounting	6
Business Administration 200—Legal Environment of Business	3
Business Administration 202—Principles of Marketing	3
Business Administration 210—Production Management and Organization	3
Economics 102, 103—Principles of Economics	6
Economics 172, 173—Quantitative Methods	6
Finance 254—Business Finance	3
D. MAJOR	15–24
E. ELECTIVES[4]	21–30
Total required for graduation, exclusive of physical education and basic military training	124

NOTES

[1] Speech 111 and 112 may be substituted for Rhetoric 101, 102, and Speech 101.

[2] Mathematics 135, or Mathematics 120 and 130, or 131 may be substituted for Mathematics 124, 134.

[3] The following regulations apply:

a. The behavioral science sequence should be started not later than the sophomore year. Business administration majors must select the sequence in psychology.

b. Two or more courses in the general education sequences (List 1 through 4) must be selected from 200–300 level courses.

c. The courses used to meet the general education sequence requirements may not be counted elsewhere.

d. Substitution of other courses in the approved sequences must be approved by the Dean of the College or his representative in the Commerce Undergraduate Office.

e. General education sequence courses may be taken under the pass-fail option.

The courses included in the various general education sequences are listed below. Titles and course descriptions are presented in the *Undergraduate Courses* catalog of the University of Illinois.

[4] Electives may be taken under the pass-fail option.

GENERAL EDUCATION SEQUENCES

LIST 1: FOREIGN LANGUAGE, HUMANITIES, NATURAL SCIENCE

Art 116, Music 130, 131
Art 111, 112, and Music 113 or 115
Astronomy 101, 102
Biology 100, 101
Botany 100, Zoology 104
Chemistry 107, 108
Chemistry 101, 102
Entomology 103, Physiology 103
Entomology 103, Zoology 104
Foreign Language: eight-hour sequence in any language (intermediate or above)
Geography 102, 103
Geology 101, 102
Humanities 151, 152
Humanities 211, 212
Humanities 215, 216
Liberal Arts and Sciences 141, 142
Liberal Arts and Sciences 161, 162
Mathematics 140, 141, or 145, and any 300-level course (excluding 305, 306, and 307)
Philosophy: at least eight hours
Physics 101, 102
Physics 106, 107

LIST 2: BEHAVIORAL SCIENCE

Anthropology 103, 260
Psychology 100 and 200- or 300-level course in Psychology (Psychology 201 recommended)
Sociology 151, 152
Sociology 100 and any two 200- or 300-level courses in sociology
(Students majoring in business administration must select sequence in psychology.)

LIST 3: HISTORY OR POLITICAL SCIENCE

History 111, 112 or any two of History 305, 306, 309, 310, 311, 312, 313, and 314
History 131, 132, or any two of History 332, 333, 334, 341, and 342
History 260, 261, 262 (any two) or any two of History 352, 354, 355, 356, 359, 360, 361, 362, 375, and 376
History 181, 182 or any two of History 381, 382, 383, 384
History 191, 192 or any two of History 307, 308, 387, 388, 391, 392, 394, 395, and 396
History 211, 212
History 320, 321, 327, 328, 329, 330 (any two)
Political Science: any two courses of three or more hours each

LIST 4: LITERATURE

Six hours of literature.

Sample Schedule of Courses

FIRST YEAR

FIRST SEMESTER	13 HOURS	SECOND SEMESTER	17 HOURS
Accy. 101	3	Accy. 105	3
C.S. 105	3	Econ. 102	3
Moth. 124	3	Math. 134	4
Rhet. 101	3	Rhet. 102	3
P.E.	1	Speech 101	3
		P.E.	1

SECOND YEAR	15 HOURS		15 HOURS
Econ. 103	3	Econ. 173	3
Econ. 172	3	List 2	4
List 2	4	General Education Sequence (List 1, 3, 4)	4
General Education Sequence (List 1, 3, 4)	4	Major or Elective	3
P.E.	1	P.E.	1

THIRD YEAR	17 HOURS		17 HOURS
Fin. 254	3	Bus. Adm. 200	3
Bus. Adm. 210	3	Major or Elective	10
Bus. Adm. 202	3	General Education Sequence	4
Major or Elective	4		
General Education Sequence	4		

FOURTH YEAR	17 HOURS		17 HOURS
Major or Elective	11	Advanced Rhetoric	3
General Education Sequence	6	General Education Sequence	3
		Major or Elective	11

Degree Programs

ACCOUNTANCY

For the degree of Bachelor of Science in Accountancy.
Required:

1. Accountancy 108, 166, 274, 308, 325, 371.

2. Two courses from Business Administration 374 and electives from accountancy.

3. Economics 300.

4. No more than thirty-three hours of credit in accountancy courses may be counted in the 124 semester-hours required for graduation.

Students who wish to prepare for a specific area of accounting should consult with staff members of the Department of Accountancy concerning selection of courses.

BUSINESS ADMINISTRATION

For the degree of Bachelor of Science in Business Administration. Students must select Psychology 201 in List 2, page 238.
Required:

Marketing: Business Administration 320, 337, 380. Two of Business Administration 206, 212, 344, 352, 360, 370.
Administrative Science: Behavioral Science—Business Administration 344 or 321; Quantitative Techniques—Business Administration 374; Business Policy—Business Administration 389.

Electives:
Three electives are to be taken in the following areas. Courses must be taken in at least two of the areas. The courses are suggestions; related courses can be included with approval of the student's adviser.

1. Production: Business Administration 314, 315; Psychology 356, 258.

2. Management Science: Accountancy 366; Business Administration 320, 360, 373, 380; Industrial Engineering 286; Mathematics 315, 351, 357, 361, 363, 364, 366, 383, 387.

3. Organizational Administration: Business Administration 323, 351; Labor and Industrial Relations 343, 360; Political Science 361, 362, 365, 366; Psychology 306, 307, 323, 351, 352, 355, 357; Sociology 218, 318, 322, 259.

No more than a total of thirty hours of credit in Business Administration, Accountancy, and Finance beyond the college general curriculum requirements may be counted toward graduation; this limit includes any courses taken to satisfy the requirements of the option.

The business policy course should, if possible, be taken after all other requirements of the option have been satisfied.

ECONOMICS

For the degree of Bachelor of Science in Economics.
Required:

1. Economics 300, 301.

2. Twelve additional hours of economics. (The department suggests, but does not require, that the twelve hours be selected from one of the following sequences.)

Economic Development: Economics 255, 350; two of Economics 312, 352, 353, 354, 357, 358, 360.

Economic History: Economics 236, 238, 306, 335.

Economic Theory: Economics 306, 312, 328, 367.

Economics of Transportation: Economics 384, Economics 360, 389, Economics 386.

Government and Economic Activity: Economics 288; two of Economics 214, 344, Finance 255; Economics 389.

International Economics: Economics 328; two of Economics 250, 352, 357, 360, Business Administration 370; Economics 329.

Labor Economics: Economics 240; two of Economics 315, 341, 343, 345; one of Law 347, Business Administration 351; Finance 360.

Quantitative Economics: Economics 272; one of Mathematics 315, 357, 361, 363; two of Economics 367, 368; Business Administration 374.

3. Students are advised to take one of the following Mathematics sequences: Mathematics 120, 130, 140; or Mathematics 120, 131, 141; or Mathematics 135, 145. Minimum requirements of the department can be satisfied by Mathematics 120, 130; or Mathematics 120, 131; or Mathematics 135; or Mathematics 124, 134. In addition, students considering graduate work should take Mathematics 315.

FINANCE

For the degree of Bachelor of Science in Finance.
Required:

1. Finance 150.

2. One of the following areas (fifteen hours):

Finance Investment, and Banking: Economics 301; three of Finance 252, 253, 255, 258, 259, 340, 350, 357, 359; one of Accountancy 274, 308, 362, Business Administration 301, 302, 374, Economics 312, 328, 335.

Insurance and Risk Management: Finance 260; three of Finance 262, 360, 363, 370, 371; one of Business Administration 302, Economics 315, Mathematics 371, 372.

Real Estate and Urban Economics: Finance 364, 365, 366; two of Architecture, 379, Economics 301, Economics 360, Geography 366, Psychology 369, Sociology 276, Urban Planning 171.

Teacher Education Minors for Non-Commerce Students

ACCOUNTANCY

	HOURS
Accy. 101—Principles of Accounting, I	3
Accy. 105—Principles of Accounting, II	3
Accy. 108—Intermediote Accounting	3
Electives	11 or 12
Accy. 166—Cost Accounting	3
Accy. 274—Basic Federal Income Tax Accounting	3
Accy. 308—Advanced Accounting	3
Accy. 366—Managerial Accounting and Quantitative Techniques	3
Econ. 108—Elements of Economics	3 or 4
Bus. Adm. 200—Legal Environment of Business[1]	3
One of the following:[1]	
Bus. Adm. 202—Principles of Marketing	3
Bus. Adm. 301—The Law of the Uniform Commercial Code	3
Bus. Adm. 302—Wills, Estates, and Trusts	3
Total	20 or 21

NOTES

[1] Business Administration 200 now takes the place of Business Law 201–202. Students who wish to be certified for teaching business law must take one other course in the field.

ECONOMICS EDUCATION

Business education majors may also elect this minor. The same courses may not count as fulfilling both major and minor requirements.

	HOURS
Econ. 102 and 103—Principles of Economics, or Econ. 108—Elements of Economics and Economics 103 (special section)	6
Econ. 313—Economics of Consumption, or Home Econ. 271—Home Management	2 or 3
Fin. 150—Money, Credit, and Banking, or Fin. 257—Corporation Finance, or Fin. 260—Economics of Insurance	3
Electives	9
Econ. 214—Government Finance and Taxation	3
Econ. 240—Labor Problems	3
Econ. 255—Comparative Economic Systems	3
Fin. 150—Money, Credit, and Banking	3
Fin. 257—Corporation Finance	3
Fin. 259—Investment	3
Fin. 260—Economics of Insurance	3
Home Econ. 271—Home Management	2
Total	20 or 21

Reporting the news.

College of Communications

For those who have had two years of college work, the College of Communications offers an additional two years of professional education leading to the degree of Bachelor of Science.

The college offers education in three curricula. The Department of Advertising supervises work in the advertising curriculum for students expecting to enter advertising agencies or the advertising departments of newspapers, magazines, radio and television stations, industrial organizations, or retail stores. The news-editorial curriculum of the Department of Journalism is intended for students preparing for positions as editors, reporters, and writers for newspapers, magazines, and technical publications; for positions in the field of community journalism; and for news work in the broadcast media. The Department of Radio and Television prepares students for general broadcasting work or for such specialties as announcing, news, production, direction, sales, and writing. Instruction in this curriculum makes use of the radio and television facilities operated by Stations WILL-AM-FM-TV in the college.

Students with appropriate interests and aptitudes may combine study in this college with study in other specialized fields. Two combination programs, one in home economics journalism and one in agricultural journalism, have been established. It is also possible to combine work in the college with study of the affairs, cultures, and languages of various parts of the world in programs such as those offered by the Center for Asian Studies and the Center for Russian Language and Area Studies. Students interested in these cooperative programs should see their department head for permission and advice. It is desirable that they begin the programs as early in their junior year as possible.

Instruction in journalism at the University was begun in 1902 as part of the courses in rhetoric and was organized as a division of the Department of English in 1916. The School of Journalism was established in 1927 as a separate administrative unit, and in 1941 it was moved into quarters designed especially for its use in Gregory Hall. In 1950 the name was changed to School of Journalism and Communications with divisions of journalism, radio, and advertising; later, the radio division added instruction in television. In September, 1957, the school was elevated to college status, and in September, 1959, the college's three divisions were redesignated as departments. In 1968 the college's name was changed to College of Communications.

The college's sequences in news-editorial work, advertising, and radio-television have been accredited by the American Council on Education for Journalism.

LIBRARY, LABORATORIES, AND EQUIPMENT

In its quarters in Gregory Hall, the College of Communications educates communications workers with modern equipment which includes a library, newsrooms, photography darkrooms, radio and television classrooms and radio broadcasting studios, printing laboratory, and advertising layout laboratory.

Radio students make use of portable tape recorders for assignments. Both, newspaper and radio wire copy come to the copy desks for use by the student editors. Typography students study the engraving, offset, and stereotyping processes, and photograpers have a completely equipped laboratory with ten darkrooms, workrooms, studios, and telephoto sending and receiving equipment. Press cameras are available for classroom and outside assignments. Television students utilize modern, well-equipped studios for classroom productions in the University Television Building.

PRE–COLLEGE PREPARATION

Students planning to enter the College of Communications are advised to register as freshmen and sophomores in the College of Liberal Arts and Sciences. During a student's first two years in the College of Liberal Arts and Sciences or another college, he must follow the requirements of that college in which he is enrolled. Students should try to include courses in economics, English, history, philosophy, political science, psychology, and sociology or anthropology. A reasonable degree of typing ability should be acquired before entering the college, since satisfactory progress in the curricula depends upon it.

Students completing their freshman and sophomore studies at institutions other than the University of Illinois at Urbana-Champaign are advised to defer courses in advertising, communications, journalism, or radio and television until enrolled in the College of Communications. Transfer students must take all of their required professional courses in the College of Communications. Students may transfer up to nine hours of elective professional courses taken elsewhere, provided that they take an equivalent number of additional hours in advanced social studies, arts, and sciences beyond the twenty hours required for graduation by the college.

REQUIREMENTS FOR ADMISSION

For admission to the College of Communications as a candidate for a degree, a student must meet the following requirements:

1. Complete sixty semester hours of undergraduate college work.

2. Present a grade-point average of 3.5. No applicant whose grade-point average in all college work is less than 3.5 is admitted except on approval by the college of an individual petition for admission.

REQUIREMENTS FOR GRADUATION

The college offers three programs of study leading to the degree of Bachelor of Science: the news-editorial curriculum for journalism majors; the advertising curriculum for advertising majors; and the radio and television curriculum for radio and television majors. Degree requirements, in addition to the general University requirements as to registration, residence, scholarship, fees, and courses in physical education and rhetoric and approved sequences in the humanities, social sciences, and natural sciences listed below, include the following:

1. A total of 124 hours of credit, not counting the first two years in military training and physical education service courses.

2. Not less than thirty hours nor more than thirty-six hours in courses offered by the college—advertising, journalism, and radio and television courses. Undergraduate courses crosslisted with advertising, journalism, or radio and television courses are considered college offerings. Undergraduate communications courses crosslisted with departments outside the college only are not counted at college offerings.

3. Not less than twenty hours in advanced social studies, arts, and sciences approved by the faculty. The home economics minor or the agriculture minor may be substituted for the requirement of twenty hours in advanced social studies.

4. Completion of the requirements of one of the three curricula offered by the college.

5. An average grade of "C" in all courses presented for the degree. In addition, the student must obtain a "C" average for all courses taken while registered in the college.

GENERAL EDUCATION SEQUENCES

To be graduated from the College of Communications, a student entering the college after June 1, 1964, must have completed a minimum of six hours each in the humanities, the social sciences, and the natural sciences. The following sequences have been approved. A student may not use sequences from any one department to satisfy the requirement in more than one of these fields. Any substitutions of sequences must be approved by the dean of the college.

HUMANITIES

1. Any one of the following sequences: Philosophy 101, 102; English 101, 102, or 103 (any two); 115–116; 121, 122, or 123 (any two); Humanities 151, 152; an eight-hour sequence in one foreign language (intermediate level or above); or

2. Any sequence approved by another college in the University, if the student completed or started the sequence while enrolled in that college.

SOCIAL SCIENCES

1. Any one of the following sequences: Anthropology 102, 103; Economics 102, 103; History 111, 112; 131, 132; 151, 152; Philosophy 103, 104; Political Science 150, 151; 191, 192; Psychology 100, 210; Sociology 151, 152; or

2. Any sequence approved by any other college in the University, if the student completed or started the sequence while enrolled in that college.

NATURAL SCIENCES

1. Any one of the following sequences: Biology 100–101; Liberal Arts and Sciences 141, 142; Zoology 104, Botany 100; Zoology 104, Physiology 103; Zoology 104, Entomology 103; Botany 100, Entomology 103; Astronomy 101, 102; any six hours of chemistry or any six hours of mathematics, exclusive of Mathematics 101, 104, 111, 112, and 114, or any six hours of physics; or

2. Any sequence approved by any other college in the University, if the student completed or started the sequence while enrolled in that college.

HONORS AT GRADUATION

For graduation with Honors, a student must obtain an average of 4.35 in all courses taken after admission to the college; for graduation with High Honors, an average of 4.75 is required.

Advertising Curriculum

For the Degree of Bachelor of Science in Communications

To be graduated from the advertising curriculum, a student must meet the general requirements for a degree listed above and must complete the following courses [1]:

	HOURS
Adv. 281—Introduction to Advertising	3
Adv. 381—Advertising Research Methods	3
Adv. 382—Advertising Creative Strategy	3
Adv. 383—Advertising Media Policy and Strategy	3
Adv. 384—Advertising Campaigns	3
Adv. 387—Advertising and Promotion Management	3
Adv. 388—Advertising in Contemporary Society	2
Advertising, Journalism, or Radio-TV electives	10
Total	30
A basic course in statistical methods	3 or 4
Econ. 108—Elements of Economics	3
Bus. Adm. 202—Principles of Marketing[2]	3
Psych. 100—Introduction to Psychology, Soc. 100—Introduction to Sociology, or Anthro. 103—Introduction to Cultural Anthropology (any two of these three courses)	7 or 8

NOTES

[1] Students with a special interest in the field of public relations may, with the consent of the department, substitute certain approved courses for some courses required in the department.
[2] This course may be credited toward the twenty hours of advanced social studies required of all students.

Each student during the third and fourth years is required to complete twenty hours of advanced social studies, enough hours of required and elective courses within the college to meet the minimum requirement of thirty hours, and enough hours of general electives to meet the requirement of 124 hours for graduation.

News-Editorial Curriculum

For the Degree of Bachelor of Science in Communications

To be graduated from the radio and television curriculum, a student must meet the general requirements for a degree listed above and must complete the following courses:

	HOURS
Journ. 204—Typography	3
Journ. 211—Newswriting	3
Journ. 212—Public Affairs Reporting	3
Journ. 217—History of Communications, Journ. 218—Communications and Public Opinion, Journ. 220—Processes and Systems of Communications, Journ. 231—Mass Communications in a Democratic Society, Journ. 241—Law and Communications, or Journ. 251—Social Aspects of Mass Communications. (A minimum of two courses from this list and such other courses as may be designated.)	6
Journ. 321—News Editing	4
Journ. 323—Advanced Reporting, or Journ. 330—Magazine Editing[1]	3
Advertising, Journalism, or Radio-TV electives	8
Total	30

NOTES

[1] Students with a special interest in Radio-TV journalism may, with the consent of their advisers and the head of the Department of Radio and Television, substitute Radio-TV 355—Television News, to meet this requirement.

Each student during the third and fourth years is required to complete twenty hours of advanced social studies, (2) enough hours of required and elective courses within the college to meet the minimum requirement of thirty hours, and (3) enough hours of general electives to meet the requirement of 124 hours for graduation.

1. In meeting the advanced social studies requirement, although students are expected to accumulate the bulk of these hours in history, political science, philosophy,

literature, economics, sociology, and anthropology, they may with the consent of their advisers accumulate advanced hours in languages, sciences, and mathematics.

2. The thirty required hours in journalism and communications: the student is expected to augment the core of required courses with electives in an area of his special interest.

3. The 124-hour graduation requirement: each student in the news-editorial curriculum is required to complete at least six hours each in history, political science, philosophy, economics, sociology or anthropology, and English or American literature. Advanced social studies courses taken in these fields to fulfill requirement 1 may also be used toward fulfilling this requirement, as may lower division courses taken anytime during the student's four years.

Radio and Television Curriculum

For the Degree of Bachelor of Science in Communications

To be graduated from the radio and television curriculum, a student must meet the general requirements for a degree listed above and must complete the following courses:

	HOURS
Adv. 281—Introduction to Advertising	3
Journ. 211—Newswriting	3
R–TV 252—Television Laboratory	3
R–TV 261—Principles of Radio and Television Broadcasting	2
R–TV 368—Radio and Television Regulation	2
Advertising, Journalism, or R–TV electives including at least 8 hours in R–TV courses	17
Total	30

Each student during the third and fourth years is required to complete twenty hours of advanced social studies, enough hours of required and elective courses within the college to meet the minimum requirement of thirty hours, and enough hours of general electives to meet the requirement of 124 hours for graduation.

Minor in Home Economics for Majors in This College

For a minor in home economics, the student must complete a minimum of twenty hours in home economics, including six hours of required courses as indicated below. The twenty hours in home economics courses may be substituted for the twenty hours of advanced social studies required by the college for graduation. However, all students in the news-editorial curriculum must satisfy the departmental requirement of at least six hours each in history, political science, philosophy, economics, sociology or anthropology, and English or American literature. These courses may be at the lower or upper division level.

Required Courses:	HOURS
Home Econ. 120—Elementary Nutrition, or Home Econ. 132—Foods and Nutrition	2 or 3
Credit is not given in Home Economics 132 and 133 in addition to Home Economics 120 and 125.	
Home Econ. 183—Consumer Textiles	2
Home Econ. 271—Home Management, or Home Econ. 171—Home Management, and Home Econ. 270—Family Financial Management	2 or 5
Electives in Home Economics	14 or 10
Total	20

Electives:	
Home Econ. 105—Child and Family	4
Home Econ. 125—Food Selection and Preparation	3

Home Econ. 133—Food Management	2
Credit is not given in Home Economics 132 and 133 in addition to Home Economics 120 and 125.	
Home Econ. 160—The Home and Its Furnishings	4
Home Econ. 184—Clothing Selection	2
Home Econ. 202—Laboratory in Child Development	2
Home Econ. 210—Family Relationships	3
Home Econ. 231—Foods	3
Home Econ. 260—Period Styles in Home Furnishings	3
Home Econ. 280—Household Textiles	2
Home Econ. 285—History of Costume	2
Home Econ. 287—Consumer Clothing Problems	2
Home Econ. 395—Fashion Analysis	3

Minor in Agriculture for Majors in This College

For a minor in agriculture, the student must complete a minimum of twenty hours in agriculture. These twenty hours may be substituted for the twenty hours of advanced social studies required by the college for graduation. However, all students in the news-editorial curriculum must satisfy the departmental requirement of at least six hours each in history, political science, philosophy, economics, sociology or anthropology, and English or American literature. These courses may be at the lower or upper division level. No specific courses or sequence of courses is required for admission to the agriculture minor.

Required Courses:	HOURS
Agr. Econ. 220—Farm Management	3
Agron. 121—Principles of Field Crop Science	4
An. Sci. 221 or D.S. 221—Principles and Applications of Animal Nutrition	4
Electives in Agriculture	9
Total	20

Electives:	
Agr. Econ. 305—Agricultural Policies and Programs	3
Agr. Mech. 100—Engineering Applications in Agriculture	3
Agr. Mech. 112—Tractors and Field Machinery	3
Agron. 101—Introductory Soils	4
An. Sci. 201—Livestock Management, or An. Sci. 301—Beef Production, or An. Sci. 303—Pork Production, or An. Sci. 304—Poultry Production	3 or 5
D.S. 100—Introduction to Dairy Production	3
For. 100—Farm Forestry	3
Hort. 100—Introductory Horticulture	3
Rural Sociol. 277—Rural Social Problems	3

Teacher Education Minor in Journalism

The teaching minor in the field of journalism requires a minimum of eighteen hours in journalism and communications. In addition to four required courses with a total of thirteen hours credit, a minimum of six additional hours must be chosen from a selected group of electives.

In order to qualify for teaching in Illinois, it is necessary that the student have additional credit of six hours in English.

Required Courses:	HOURS
Journ. 204—Typography	3
Journ. 211—Newswriting	3
Journ. 308—High School Journalism	3
Journ. 321—News Editing	4
Electives in Journalism and Communications	5
Total	18

Electives:

Adv. 281—Introduction to Advertising	3
Journ. 212—Public Affairs Reporting	3
Journ. 215—Contemporary Affairs	2
Journ. 218—Communications and Public Opinion	3
Journ. 223—Photo-Journalism	3
Journ. 326—Magazine Article Writing	3
Radio-TV 261—Principles of Radio and Television Broadcasting	2

Special Education Class.

Urbana Council on Teacher Education

Six colleges of the University of Illinois offer bachelor's degree programs leading to teacher certification in the state of Illinois and qualification for certification in most states. These include the College of Agriculture, the College of Education, the College of Engineering, the College of Fine and Applied Arts, the College of Liberal Arts and Sciences, and the College of Physical Education. The Urbana Council on Teacher Education is responsible for the coordination of teacher education on the Urbana campus of the University and for maintaining relationships with the state certification authorities.

Graduates of curricula approved by the Urbana Council on Teacher Education are eligible for certification as teachers on the basis of the University's recommendation to the State Teacher Certification Board.

REQUIREMENTS FOR ADMISSION

Applicants to teacher education curricula must meet the admission requirements of the colleges offering the chosen curricula. These requirements are presented in the Admissions Chart, pages 38 to 48. In addition, students transferring to University of Illinois teacher education curricula from other curricula, colleges, or institutions, who have completed sixty or more semester hours of credit, must present cumulative averages of 3.5 or more (based on a five-point system, A = 5) for admission in good standing. A student whose cumulative average is less than 3.5 may apply for admission, but will be considered individually on a petition basis if enrollment vacancies exist in the college and curriculum for which he is applying. If admitted, such students are placed on academic probation in accordance with college regulations.

ACADEMIC QUALIFICATIONS FOR TEACHER EDUCATION

Appropriate Council committees will meet every semester or summer session to consider each student's academic record. Until the student in teacher education has attempted at least forty-five semester hours of course work, his continuation will be subject only to the regulations of the college in which he is enrolled. On the conclusion of the semester containing the forty-fifth hour of attempted course work, and thereafter on the completion of each additional fifteen-hour increment of course work, the records of each student in teacher education will be reassessed.

GOOD STANDING IN TEACHER EDUCATION

At the time of each assessment, a student whose University of Illinois and cumulative averages fall in the range 3.5 and above, and whose most recent semester average is no less than 3.3, is normally assigned to the status of *Good Standing in Teacher Education*. Those maintaining such status after each review period will be eligible for admission to student teaching.

PROVISIONAL STATUS IN TEACHER EDUCATION

A student whose University of Illinois or cumulative average falls in the range 3.3 to 3.5, or whose most recent semester average is less than 3.3, normally will be placed on *Provisional Status in Teacher Education.* Students on provisional status in teacher education are eligible for continuation in teacher education, but should meet requirements for good standing by the ensuing review date.

DISQUALIFIED STATUS IN TEACHER EDUCATION

A student whose University of Illinois or cumulative average falls below 3.3 is normally ineligible for continuation in teacher education and is placed on *Disqualified Status.* If a disqualified student wishes to continue study at the University of Illinois, and if he is academically eligible, he may transfer to a curriculum outside of teacher education. Students in the College of Education who are disqualified for continuation in teacher education may not re-enroll as students in that college although they may be considered for readmission after additional course work in which there is evidence of marked improvement in scholarship.

NOTICES OF STATUS

Committees of the Urbana Council on Teacher Education review the records of students in each teacher education curriculum in November, April, and July. Students are then notified of their status on the basis of the procedure described below:

On the completion of courses totaling at least

a. Forty-five semester hours, the student will be notified of his status in teacher education as described above.
b. Sixty semester hours, the student will be advised again of his status in teacher education and, if eligible for continuation, the student will be invited to apply for a student teaching assignment.
c. Seventy-five semester hours, students in good standing in teacher education will be notified of their admission to student teaching and advised that specific information concerning student teaching placement will be forthcoming. Students on provisional status may be advised of tentative teaching assignments which would be confirmed only on the achievement of good standing in teacher education at the ensuing review period. Those on provisional status in teacher education will not be permitted to complete student teaching requirements during the semester in which provisional status is in effect.
d. Ninety semester hours, only students whose status has been changed since the previous review date will receive notices. Students formerly on provisional status in teacher education who achieve good standing will be notified appropriately. Those in good standing whose records deteriorate below acceptable levels will be notified of the appropriate change of status. Students previously admitted to student teaching may not engage in student teaching activities while on provisional status in teacher education or on academic probation in the college administering their programs.
e. One hundred and five semester hours, only students who status has been changed since the previous review date will receive notices. Students formerly on provisional status in teacher education who achieve good standing will be notified appropriately. Those in good standing whose records deteriorate below acceptable levels will be notified of the appropriate change of status. Students previously admitted to student teaching may not engage in student teaching activities while on provisional status in teacher education or on academic probation in the colleges administering their programs.

STUDENTS TRANSFERRING TO TEACHER EDUCATION

Transfer students entering a teacher education curriculum with forty-five or more semester hours of credit, and having met the 3.5 requirement for admission to teacher education, will receive notices indicating that they are on provisional status in teacher education. Such status is no reflection on the achievement of the student; rather, it is one in which he is placed pending the completion of at least one semester of work in a teacher education curriculum at the University of Illinois. The notice of status in teacher education will indicate in such cases that the reason for provisional status is that data for the current semester are needed.

PERSONAL QUALIFICATIONS FOR TEACHER EDUCATION

It is common knowledge that teaching effectiveness is influenced not only by academic proficiency but also by the personal characteristics of the teacher. Recognizing the importance of these personal factors, counseling services are provided for all students in teacher education. Any student wishing to avail himself of these services may make an appointment with a counselor for students in teacher education by calling 333-2800, or visiting 120 Education Building.

Since it is essential that counseling services be offered as soon as the need becomes apparent, teacher education advisers and instructors of professional education courses are asked to participate in this program. These staff members have received information about the counseling services offered under the auspices of the Council and have been invited to recommend counseling for any student about whom concern is felt. Such a student will be requested by letter to make a counseling appointment to discuss personal matters in which the counselor may be of assistance. The primary objective of this procedure is to provide assistance to all teacher education students who may benefit from these services.

Students who are requested by letter to make interview appointments with the teacher education counselor should respond to that request as a requirement of the Urbana Council on Teacher Education. Failure to respond will jeopardize the standing of the student in teacher education.

During the interview, the student will be informed of the various sources of assistance available on this campus. The use of these services, after the interview, will usually be optional with the student.

In exceptional cases, the counselor may recommend that a student be required to enter counseling with one of the campus services. Such referrals are mandatory upon the student who wishes to continue in a teacher education curriculum and are individualized to fit the needs of the student being referred.

The services of the teacher education counselor are available to all students in teacher education. Students experiencing academic difficulty, uncertainty of career choice, or problems of a more personal nature are invited to explore these with the counselor who is qualified to assist in many matters and well-informed concerning other sources of assistance.

STUDENT TEACHING

Students should apply for tentative student teaching assignments on completion of sixty semester hours of credit. Normally, eligible students will receive application forms with the sixty-hour Notice of Status as described heretofore. Students who are otherwise eligible, but who have not received application forms, should contact the appropriate Office of Student Teaching during the fall semester advance enrollment period. Students who are not on the campus during the fall semester, but who expect to enroll in educational practice (student teaching) during the next school year, should secure application forms from their Office of Student Teaching early in the spring semester prior to the school year in which student teaching would be scheduled. The latest date for any currently enrolled eligible student to apply for a student teaching assignment for the next academic year is the last day of the third week of instruction in the spring semester. Currently enrolled students filing their applications after this date cannot be assured of a student teaching assignment during the next academic year.

Educational practice is administered under the general supervision of the Illinois Teaching Experience Laboratory. Following is a list of the Offices of Student Teaching serving each teaching area (all offices are located in the Education Building): Secondary Education (Room 398), Elementary Education (Room 304), Special Education (Room 210), and Vocational and Technical Education (Room 347).

Students who have completed sixty or more semester hours of course work and who have achieved good standing or provisional status in teacher education will be invited to apply for tentative student teaching assignments. On the completion of seventy-five or more semester hours of course work, students who qualify for good standing in teacher education receive confirmations of admission to student teaching and will later be notified of their assignments. Students on provisional status must achieve good standing before admission to student teaching and confirmation of their student teaching assignments. *Students disqualified for continuation in teacher education and students not officially registered in teacher education curricula are ineligible for student teaching.*

Students on college academic or disciplinary probation are not eligible for student teaching during the semester in which the probationary status is in effect and are not permitted to engage in student teaching activities.

Students in teacher education should anticipate and plan for off-campus student teaching assignments during the professional semester. For most students, an additional expense of approximately $250 will be incurred during the semester in which student teaching is scheduled. Only a very limited number of assignments for student teaching are available in the schools in the vicinity of the campus. Students will be assigned to these schools as student teachers only in clear cases of special need for local assignment. It is not presently possible to arrange local assignments for all whose need would justify such assignment. Local placement is determined where applicants have been ranked on the basis of need.

GENERAL REQUIREMENTS

University regulations permit the waiver of required basic physical education courses for transfer students who enter with sixty or more hours of credit. However, in order to meet a teacher certification requirement established by Illinois law, a student must earn credit in at least one course in health or physical education.

All teacher education curricula must include one course in United States history and one course in political science which covers both Illinois and federal constitutions. These courses may be selected from the following: History 151, 152, 260, 261, 262, and Political Science 150 or 191. Although both courses are required for every teacher education curriculum, they are sometimes omitted with the result that the student cannot be recommended for teacher certification.

PROCEDURE FOR OBTAINING TEACHER CERTIFICATION PREREQUISITE CREDIT IN A FOREIGN LANGUAGE

Students who enroll in advanced courses of a foreign language as a result of their performance on a placement examination are often eligible to receive prerequisite credit in that language for teacher certification purposes only. Those who are qualified to receive prerequisite credit, and who declare the foreign language as their major or minor, should go to the Recorder's Office, Office of Admissions and Records, during the second semester before graduation. Transfer students should go directly to the appropriate language department office to initiate the procedure.

SUBJECTS OF SPECIALIZATION

Each student seeking a degree and certification for teaching at the secondary level must develop the teaching fields (usually two) prescribed by his chosen curriculum. If the curriculum requires a second teaching field, it must be selected from the teacher education minors listed below.

TEACHER EDUCATION CURRICULA

The teacher education curricula offered by the colleges are as follows:

Art Education—page 332
Biology—page 384
Business Education—page 270
Chemistry—page 387
Dance—page 340
Early Childhood Education—page 273
Earth Science—page 390
Education of Deaf and Hard of Hearing Children—page 277
Education of Mentally Handicapped Children—page 278
Elementary Education—page 274
Engineering Technology—page 316
English—page 391
French—page 394
French, Combined Elementary and Secondary School Program—page 395
Geography—page 395
German—page 397
German, Combined Elementary and Secondary School Program—page 398
Health Education—page 421
High School Teaching—page 261
Specialty in Life Science—page 262
Specialty in English—page 263
Specialty in French—page 265
Specialty in General Science—page 266
Specialty in German—page 266
Specialty in Latin—page 267
Specialty in Mathematics—page 268

Specialty in Physical Science—page 268
Specialty in Russian—page 269
Specialty in Social Studies—page 269
Specialty in Spanish—page 270
Industrial Education—(see Technical Education Specialties)
Latin—page 398
Latin, Combined Elementary and Secondary School Program—page 399
Mathematics—page 400
Music Education—page 349
Physical Education for Men—page 426
Physical Education for Women—page 428
Physics—page 403
Russian—page 405
Russian, Combined Elementary and Secondary School Program—page 406
Social Studies—page 407
Spanish—page 409
Spanish, Combined Elementary and Secondary School Program—page 409
Speech—page 410
Speech and Hearing Science—page 411
Technical Education Specialties—page 275
Vocational Agriculture—page 210
Vocational Home Economics—page 226

TEACHER EDUCATION MINORS

Approved programs for teacher education minors are offered by appropriate colleges or departments as follows:

Accountancy—page 241
Art—page 334
Biology—page 387
Chemistry—page 390
Coaching—page 428
Dance—page 342
Earth Science—page 391
Economics—page 241
English—page 394
English as a Second Language—page 393
Rhetoric—page 393
French—page 395
General Science—page 387
Geography—page 396
German—page 398
Health Education—page 425
Home Economics—page 227
Italian—page 398
Journalism—page 248
Latin—page 400
Library Science (Education and L.A.S.)—page 416
Mathematics—page 402
Music—page 351
Physical Education for Men—page 428
Physical Education for Women—page 431
Physical Science—pages 390, 404
Physics—page 404
Portuguese—page 404
Psychology—page 404
Russian—page 407
Safety and Driver Education—page 426
Social Studies—page 408
Spanish—page 410
Speech—page 411

Students and advisers who need assistance in the development of programs for teacher education minors are urged to consult the adviser in the corresponding major field.

TEACHER CERTIFICATION

Before graduation, each student who wishes teacher certification by the state of Illinois (outside the city of Chicago) is given an application for a Certificate of Entitlement. This form should be completed and returned to the Office of the Coordinator of Teacher Education, 120 Education Building, within the first month of the student's final semester. Each graduate of a teacher education program who returns such an application on time receives a Certificate of Entitlement within a month after his graduation. To receive an Illinois Teacher's Certificate, he should present the teacher certification entitlement card to an Illinois County Superintendent of Schools.

The "School Code of Illinois" states that each person who applies for certification must be a citizen of the United States or have filed a declaration of intent to become a citizen of the United States.

A teacher education student who wishes to teach in the city of Chicago should write, in the first week of his final semester, to the Board of Examiners, Board of Education, 228 North LaSalle Street, Chicago.

Questions concerning teacher certification should be directed to the Office of the Coordinator, Urbana Council on Teacher Education, 120 Education Building, Urbana, Illinois 61801.

EDUCATIONAL PLACEMENT

The University's Educational Placement Office stores and processes professional credentials of University students and alumni who are qualified to apply for employment in educational institutions. Vacancies which come to the office are announced to registered candidates through a weekly vacancy list available at the office. Experienced consultants are available to assist candidates in setting up credentials and in planning their search for new employment. Students seeking educational employment register with the Educational Placement Office, 140 Education Building, in the fall semester of their senior year. Meetings for seniors are held in the first week of October to begin this process.

Education Building

College of Education

The College of Education prepares students for careers in teaching and special educational services. Curricula offered at the undergraduate level lead to teacher certification. All curricula include supervised teaching practice in school systems cooperating with the college.

REQUIREMENTS FOR ADMISSION

The curricula in the education of deaf and hard-of-hearing children, education of mentally handicapped children, business education, early childhood education, elementary education, and industrial education begin with the first year. Admission requirements for these programs are given on page 43. Junior standing is required for admission to all other curricula. The two years of study required for admission may be completed in any accredited institution of higher learning. Juniors entering from the University's College of Liberal Arts and Sciences should have completed the prescribed subjects and group requirements of the sciences and letters curriculum or the first two years of work in a general curriculum. A junior entering from any other college of the University should have completed the first two years of a regular curriculum, and anyone transferring from another institution must have acceptable credit for an equivalent amount of work in that institution.

An average of 3.5 in all courses is required to transfer in good standing to the College of Education. A student with an average below 3.5 is recommended for admission on probation when evidence indicates he is capable of improving the quality of his work and that he possesses the characteristics necessary to become a successful teacher.

Students in the College of Education who are preparing for graduate work should arrange their undergraduate programs to meet the requirements for admission to the Graduate College. Special programs leading to the degrees of Master of Education, Advanced Certificate in Education, and Doctor of Education are described in the catalog of the Graduate College.

REQUIREMENTS FOR GRADUATION

Each candidate for a baccalaureate degree in the College of Education must meet the general University requirements with reference to registration, residence, fees, physical education, and rhetoric. Students who are preparing for business education, early childhood education, elementary education, education of deaf and hard-of-hearing children, education of mentally handicapped children, or technical education specialties (industrial education) must meet the specific requirements of their curricula with satisfactory scholastic averages. Students who are preparing for other teaching fields must secure credit, with satisfactory scholastic averages, in approved courses totaling at least 120

semester hours, including the credit accepted for admission to this college, but not counting the first two years of military training if elected, and physical education.

Candidates for teacher education degrees from the University of Illinois must complete educational practice (student teaching) at the University of Illinois.

GENERAL EDUCATION SEQUENCES

Each candidate for a degree in the College of Education must complete an approved sequence in each of three areas including humanities, natural sciences, and social sciences. The student may select one of the appropriate sequences in each of the three areas listed below. At least six semester hours of credit are required in each of the three areas. It is essential that the student complete the sequence as specified.

Sequences developed as a part of the major field are acceptable.

NATURAL SCIENCES

Astronomy 101, 102
Biology, 100, 101
Biology 110, 111
Botony 100, Zoology 104
Chemistry—any six hours
Entomology 103, Botony 100
Entomology 103, Zoology 104
Geography 102, 103
Geology 101, 102
Geology 101 and Geography 103
Liberal Arts and Sciences 141, 142
Mathematics—any six hours exclusive of Mathematics 104, 111, and 114
Note: Mathematics is not acceptable as a physical science in early childhood education and elementary education.
Microbiology 100, 101, Entomology 103
Microbiology 100, 101, Zoology 104
Physics—any six hours
Physiology 103, Entomology 103
Physiology 103, Zoology 104

SOCIAL SCIENCES

Anthropology 102, 103
Economics 108, 255
Economics 108 and History 151, or 152, or 261 or 262
Geography 104, 105
History 111, 112
History 151, 152
History 151, or 152, or 261 or 262, and Political Science 150
History 247, 248
History 260, 261
Philosophy 103, 104
Political Science 191, 192
Sociology 100 and a 300-level course in Sociology
Sociology 151, 152

HUMANITIES

Art 111, or 112, plus either a 300-level course in history of art or Philosophy 323
Classics 301, 302
English 101, 102, 103 (any two of these three courses)
English 103, and either Art 111 or 115
English 115, 116
English 255, 256
English 257, 258
French 201, 202
German 210 and one of the following: 208, 250, 251, 252, 253, 260
History 131, 132
History 323, 324

Humanities 151, 152
Humanities 211, 212
Humanities 363, 364
Music 130, plus 131 or 312 or 313
Philosophy 101, 102
Philosophy 105, 110 and an elective religion course
Philosophy 110 and elective religion courses
Philosophy 303, 306
Russian 215, 216
Spanish 221, 222
Speech 121, 221
Speech 307, 308
Speech 311, 312
Speech 352, 366
Speech 361, 362
Speech 141, 342, 345 (any six hours)

HONORS AT GRADUATION

Eligibility for graduation with honors is established on the fulfillment of both residence and scholastic requirements. Residence requirements for graduation with honors are fulfilled under the following conditions:

1. Meeting University residence requirements for graduation, except that at least fifty-four of the last sixty semester hours of credit must have been earned in residence at Urbana.

2. Obtaining waiver of University residence requirements by petition to the Vice-Chancellor and earning at least fifty-four of the last sixty semester hours of credit through resident study at Urbana.

3. Meeting University residence requirements and having completed all but fifteen hours in resident study.

4. Having completed the first ninety semester hours in residence and all or part of the senior year in an approved program at another institution for the University of Illinois degree.

A student who achieves the required scholastic average in all education courses and in all work presented for graduation (excluding religion credits), with education and graduation averages computed separately, may be recommended for honors as follows: education and scholastic averages of 4.25, minimum, graduation with Honors; education and scholastic averages of 4.5, minimum, graduation with High Honors; education and scholastic averages of 4.75, minimum, graduation with Highest Honors.

Curriculum Preparatory to High School Teaching

For the Degree of Bachelor of Science in Secondary Education

The curriculum preparatory to high school teaching includes the following requirements in general education and professional education common to all specialties. In addition to the requirements below, refer to pages 251 to 256 for teacher education requirements applicable to all curricula.

GENERAL EDUCATION REQUIREMENTS	HOURS
History 152	4
Humanities[1]	6
Natural Sciences[1]	6
Political Science 150	3
Psychology 100	4
Rhetoric 101, 102 and Speech 101, or Speech 111, 112	8 or 9

PROFESSIONAL EDUCATION REQUIREMENTS

	HOURS
Educational Practice 242	5
Educational Practice 250 (recommended)	(2)
Educational Psychology 211	3
History and Philosophy of Education 201	2
Secondary Education 101	2
Secondary Education 240	2
Secondary Education 241	4 or 5

NOTES

[1] Sequences in Natural Science and Humanities must be selected from the approved list of general education sequences prescribed for students in the College of Education, unless such sequences are included in the major or minor field.

Students transferring to this curriculum without credit in health or physical education must complete at least one course in health or physical education in order to fulfill requirements for teacher certification.

Students in this curriculum complete one of the approved teacher education minors listed on page 255 of this catalog.

Specialty in Life Science

Required core courses include:

	HOURS
Physics	10 to 12
Physics 101, 102—General Physics	10
or	
Physics 106, 107, 108—General Physics	12
Chemistry	8 to 10
Chem. 101, 102—General Chemistry	8
or	
Chem. 107, 108—General Chemistry	10
Life Science	10
Biol. 110, 111—Principles of Biology	10
Descriptive Statistics or Educational Measurement	3 to 4
Select one of the following:	
Agron. 340—Introduction to Applied Statistics	4
Biol. 371—Quantitative Biology	4
Ed. Psych. 390—Elements of Educational Statistics	3
Ed. Psych. 391—Construction and Use of Tests in Teaching, or 392—Introduction to Principles of Measurement	4
Math. 161—Statistics	3
Psych. 235—Statistical Methods in Psychological Research	4
Requirements in each of the following groups must be met:	
Organic Chemistry	5
Select one of the following sequences:	
Chem. 131, 134—Elementory Chemistry	5
or	
Chem. 136—Basic Organic Chemistry, and 181—Structures and Synthesis	5
Physiology	5
Physiol. 302—Experimental Animal Physiology, and 304—Experimental Physiology Laboratory	5
Microbiology	6
Microbiol. 200—Microbiology	3
Microbiol. 201—Experimental Microbiology[1]	3
Genetics	4
Biol. 210—Genetics	4
Vertebrate or Invertebrate Zoology	3 to 5
Select one of the following:	
Entom. 301—Introduction to Entomology	5
Entom. 312—Entomology for Teachers	3
Zool. 232—Comparative Vertebrate Anatomy	5

Zool. 304—Field and Systematic Zoology 5
Zool. 318—Protozoology 5
Zool. 320—Invertebrate Zoology 5
Zool. 321—Parasitology 5
Zool. 335—Ornithology 3
Zool. 340—Natural History of the Vertebrates 5
Zool. 343—Limnology 5
Zool. 346—Ethology 3
Zool. 347—Ethology Laboratory 3

Ecology ..... 3 to 5
Select one of the following:
Agron. 319—Environment and Plant Ecosystoms 3
Biol. 312—Environmental Biology 5
Bot. 381—Plant Ecology 5
Geog. 214—Conservation of Natural Resources 3
Zool. 312—Endocrinology 3
Zool. 345—Animal Ecology ..... 4 or 5
Zool. 369—Introduction to Human Ecology ..... 3 or 5

Botany ..... 3 to 5
Select one of the following:
Bot. 260—Introductory Plant Taxonomy 3
Bot. 304—General Plant Morphology 4
Bot. 330, 335—Plant Physiology 5
Bot. 366—Field Botany 5

Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately seventy semester hours. The completion of a teacher education minor in mathematics or one of the physical sciences is recommended.[2,3]

NOTES

[1] Microbiology may be taken for three to five hours' credit. The minimum required for teacher education is three hours. Students with particular interest in microbiology may take additional hours.

[2] Courses related to science teaching may include mathematics, history of science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of the education courses specifically required for certification. The following is a listing of courses and areas of study that deserve special consideration: Anthropology 102, 103, 240, 343, 356; Geography 378; Geology 370; History 347, 348, 349; Philosophy 170, 327, 328; Computer Science; Computer Assisted Instruction; Independent Study.

[3] Minimum state requirements for teaching of biology or physical science may be satisfied by a minimum of twenty-four semester hours of work, appropriately distributed, in the field. Minimum state requirements for teaching of mathematics may be satisfied by three appropriately distributed 300-level courses beyond a basic calculus sequence.

Specialty in English

Requirements for both options below include:

	HOURS
Lib. Sci. 304—Library Materials for Young Adults, or Engl. 310—Literature for the High School, or Sec. Ed. 354—Audio-Visual Communication	3
Sec. Ed. 336—Fundamentals of Reading Techniques	3
Speech 141—Orol Interpretotion	3
Option A: Teacher Education Major in English	32
Engl. 131—Introduction to Shokespeare	3
Engl. 255–256—Survey of American Literature, or equivalent	6
Engl. 257–258—Survey of English Literature, or equivalent	6
Engl. 386—Modern English Grammar and Usage	3
Rhet. 133—Principles of Composition, or Rhet. 143—Intermediate Expository Writing	3
English Electives	11
Six of these hours must be in courses restricted to advanced undergraduates. It is recommended that electives be chosen from English offerings in literary genres, world and/or classical literature, literary criticism, contemporary literature, backgrounds to literature, rhetoric, and linguistics.	
Teacher Education Minor:	
Selected from approved teacher education minors as described on page 255 of this catalog;	

OR

SUPPORTING AREAS OF CONCENTRATION

Students who opt this program rather than the teacher education minor are required to complete at least three courses in each of two supporting areas or at least two courses in each of three supporting areas for a total of not less than eighteen hours. The supporting areas of concentration and some recommended courses are listed below. Other appropriate courses in the area of concentration may be approved by the adviser.

	HOURS
1. Language and Communications	
Journ. 220—Processes and Systems of Communications	3
Journ. 231—Mass Communication in a Democratic Society	3
Engl. 303—Historical Introduction to the English Language*	3
Ling. 300—Introduction to Linguistics	3
Ling. 317—Languages of the World	3
Ling. 325—Introduction to Psycholinguistics	3
Ling. 338—Philosophies of Language	3
Ling. 370—Language, Culture, and Society	3
Ling. 388—Linguistics in Language Learning, I	4
2. Language Performance: Oral and Written	
Speech 113—Group Discussion and Conference Leadership	3
Speech 121—Advanced Public Speaking: The Logical Bases of Discourse	3
Speech 142—Group Oral Interpretation of Literature	2
Theatre 353—Creative Dramatics for Children	3
Rhet. 144—Narrative Writing	3
Rhet. 205—Advanced Narrative Writing, I	3
Rhet. 227—Advanced Expository Writing	3
Rhet. 330—The Writing of Poetry	3
Journ. 211—Newswriting	3
Journ. 212—Public Affairs Reporting	3
Journ. 326—Magazine Article Writing	3
Engl. 370—Theory and Practice of Written Composition*	3
3. Humanities and Philosophy	
Hum. 151—The Humanities in Western Culture	4
Hum. 152—The Humanities in Western Culture	4
Hum. 215—Arts in the 20th Century, I	4
Hum. 216—Arts in the 20th Century, II	4
Phil. 101—Introduction to Philosophy	3
Phil. Rel. St. 110—World Religions	3
Phil. 303—History of Greek and Roman Philosophy	4
Phil. 306—History of Modern Philosophy	4
Phil. 317—Great Books in Modern Thought	3
4. Methods and Theories of Critical Processes	
Speech 177—The Arts of Public Discourse	4
Engl. 215—Practical Criticism*	3
Speech 263—Fundamentals of Dramatic Writing and Structure	3
Speech 307—The Art of the Screen: Narration	3
Speech 312—American Public Address	3
Speech 321—Theories of Persuasion and Rhetorical Practice	3
Speech 322—Modern Rhetorical Theory	3
Journ. 329—The Rhetoric of Journalism	2
5. World and Classical Literatures	
French 255/Hum. 255—Introduction to French Literature in Translation, I	4
French 256/Hum. 256—Introduction to French Literature in Translation, II	4
German 201/Hum. 210—German Literature Since 1648 in English Translation	3
Russian 115—Russian Literature in Translation, I	3
Russian 116—Russian Literature in Translation, II	3
Russian 317/Hum. 317—Twentieth Century Literature in Translation	3
Classics 111—Mythology of Greece and Rome	2
Classics 112—Greek Drama in English Translation	2

Classics 301—Greek Literature in Translation 3
Classics 302—Latin Literature in Translation 3
Hum. 363—Introduction to Comparative Literature, I 3
Hum. 364—Introduction to Comparative Literature, II 3

6. The Teaching of Components of English

Speech 203—Dramatics for Teachers 3
Speech 204—Speech for Teachers 3
Journ. 308—High School Journalism 3
Engl. 310—Literature for the High School* 3
Engl. 370—Theory and Practice of Written Composition* 3
Lib. Sci. 304—Library Materials for Young Adults 3
Sec. Ed. 354—Audio-Visual Communication 3

* Courses required by students in the Liberal Arts and Sciences Curriculum Preparatory to the Teaching of English may not be counted again for credit in the supporting areas.

Option B: Teacher Education Major in Literature and Minor in Rhetoric or Minor in Teaching English as a Second Language

Major in Literature 32
Two of the following 6
Engl. 101—Introduction to Poetry
Engl. 102—Introduction to Drama
Engl. 103—Introduction to Fiction
Engl. 197—Sophomore Honors Seminar
Engl. 131—Introduction to Shakespeare, or Engl. 231–232—Shakespeare ..... 3 or 6
Engl. 215—Practical Criticism 3
Engl. 255–256—Survey of American Literature 6
Engl. 257–258—Survey of English Literature 6
Advanced English electives ..... 5 to 8
Teacher Education Minor in Rhetoric—(See the section "Curriculum Preparatory to the Teaching of English" under the College of Liberal Arts and Sciences on page 391.)
Teacher Education Minor in English as a Second Language—(See the section "Curriculum Preparatory to the Teaching of English" under the College of Liberal Arts and Sciences on page 391.)

Specialty in French

See "Specialty for Teaching French in Both High School and Elementary School," on page 395. Note in particular the substitution suggested for students who wish to prepare for teaching French in the elementary school.

Admission to this specialty requires the completion of French 104 or its equivalent.

	HOURS
Teacher Education Major in French including courses taken in the first two years	38
French 201–202—Introduction to French Literature	6
French 211–212—Oral French	6
French 213–214—Composition	4
French 217—Advanced Oral French	4
French 282—Teachers' Course	2
Teacher Education Minor	at least 20
The second teaching field must be selected from among the approved teacher education minors listed on page 255.	
Electives	16
Advanced courses in French civilization and literature are recommended, particularly for students who have completed basic French courses in secondary schools. French 382—Language Laboratory Techniques, is recommended for students deficient in the skill necessary to operate a language laboratory efficiently. History and Philosophy of Education 303—Comparative Education, is recommended. Other courses may be chosen from major or minor teaching fields, or other areas of interest.	
Total including general education and professional education credit	at least 120

Specialty in General Science

Required core courses include:

	HOURS
Physics	10 to 12
Physics 101, 102—General Physics	10
or	
Physics 106, 107, 108—General Physics	12
Chemistry	8 to 10
Chem. 101, 102—General Chemistry	8
or	
Chem. 107, 108—General Chemistry	10
Life Science	10
Biol. 110, 111—Principles of Biology	10
Descriptive Statistics or Educational Measurement	3 to 4
Select one of the following:	
Agron. 340—Introduction to Applied Statistics	4
Biol. 371—Quantitative Biology	4
Ed. Psych. 390—Elements of Educational Statistics	3
Ed. Psych. 391—Construction and Use of Tests in Teaching or 392—Introduction to the Principles of Measurement	4
Math. 161—Statistics	3
Psych. 235—Statistical Methods in Psychological Research	4
Requirements in two of the three following areas must be met:	
Astron. 210—General Astronomy, or Astron. 101, 102—Descriptive Astronomy	3 or 8
Geog. 102—Physical Geography	4
Geol. 101—Physical Geology	4
Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately seventy semester hours, including fifteen semester hours of 200- and/or 300-level courses in sciences, exclusive of those listed immediately above. The completion of a teacher education minor in either biology or mathematics is recommended.[1,2]	

NOTES

[1] Courses related to science teaching may include mathematics, history of science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of the education courses specifically required for certification. The following is a listing of courses and areas of study that deserve special consideration: Anthropology 102, 103, 240, 343, 356; Geography 378; Geology 370; History 347, 348, 349; Philosophy 170, 327, 328; Computer Science; Computer Assisted Instruction; Independent Study;

[2] Minimum State requirements for teaching of biology or physical science may be satisfied by a minimum of 24 semester hours of work, appropriately distributed, in the field. Minimum State requirements for teaching of mathematics may be satisfied by three appropriately distributed 300-level courses beyond a basic calculus sequence.

Specialty in German

See "Specialty for Teaching German in Both High School and Elementary School" on page 398. Note in particular the substitution suggested for students who wish to prepare for teaching German in the elementary school.

Admission to this specialty requires the completion of German 104 or its equivalent.

	HOURS
Teacher Education Major in German including courses taken in the first two years	45
German 210—Masterpieces of German Literature	3
German 211–212—Conversation and Writing	6
German 251—Modern German Fiction, German 252—Modern German Drama, or German 260—Lyrics and Ballads	3
German 281—Teachers' Course	3
German 303—Advanced Conversation, Composition and Syntax	3
German 304—Advanced Conversation	1
German 320—History of German Civilization	4
German 365—German Phonology and Morphology	3
German Elective	3
Teacher Education Minor	at least 20
The second teaching field must be selected from among the approved teacher education minors listed on page 255.	
Electives	8 to 11
Advanced German courses not included in the minimum program are recommended, particularly for students who have completed basic German courses in secondary school. German 382—Language Laboratory Techniques, is recommended for students deficient in the skill necessary to operate a language laboratory efficiently. History and Philosophy of Education 303—Comparative Education, is recommended. Other courses may be chosen from major or minor teaching fields, or other areas of interest.	
Total including general education and professional education credits	at least 120

Specialty in Latin

See "Specialty for Teaching Latin in Both High School and Elementary School" on page 399. Note in particular the substitution suggested for students who wish to prepare for teaching Latin in the elementary school.

Admission to this specialty requires the completion of Latin 104 or its equivalent.

	HOURS
Teacher Education Major in Latin including courses taken in the first two years	42 to 45
Courses in the Latin language	37
Latin 105—Virgil	4
Latin 113–114—Latin Composition	4
Latin 201–202—Survey of Latin Literature	6
Latin 311–312—Advanced Latin Composition	4
Latin 391—Readings in Latin Literature	3
The total of thirty-seven hours may be reduced by as much as sixteen hours through prerequisite credit for work equivalent to Latin 101–105 taken in secondary school. Students who at entrance are admitted to Latin 201 are required, however, to take an additional semester of Latin 391 and Classics 301–302.	
Courses in Roman Civilization	5 to 8
Hist. 181–182—The Ancient World	6
or, if ancient history has been studied in secondary school,	
Hist. 383—History of the Roman Republic to 44 B.C.	3
Latin 162—Roman Antiquities	2
Teacher Education Minor	at least 20
The second teaching field must be selected from among the approved teacher education minors listed on page 255.	
Electives	6 to 17
Recommended electives are Classics 111, 301, 302; Greek 101, 102; History 384; Linguistics 300, 302; and Philosophy 303. A course in language laboratory techniques is recommended for students minoring in a modern foreign language who are deficient in the skill necessary to operate a language laboratory efficiently. History and Philosophy of Education 303—Comparative Education, is recommended.	
Total including general education and professional education credits	at least 120

Specialty in Mathematics

	HOURS
Required Courses in Mathematics:	
Math. 120—Calculus and Analytic Geometry	5
Math. 130—Calculus and Analytic Geometry (5) and Math. 140—Calculus and Analytic Geometry (3), or Math. 131—Calculus and Analytic Geometry (3) and Math. 141—Calculus and Analytic Geometry (5)	8
Math. 302—Topics on Geometry	3
Math. 303—Advanced Aspects of Euclidean Geometry	3
Math. 305—Teachers' Course	3
Math. 306—Selected Mathematical Topics for Secondary School Teachers, I	3
Math. 317—Introduction to Abstract Algebra	3
Math. 318—Introduction to Linear Algebra, or Math. 315—Linear Transformations and Matrices	3
Math. 343—Advanced Calculus, or Math. 347—Introduction to Higher Analysis: Real Variables	3
Required Course in Computer Science:	
C.S. 101—Introduction to Automatic Digital Computing, or C.S. 107—Introduction to Digital Computing for Secondary School Teachers	3
Total	37

Specialty in Physical Science

Required core courses include:

	HOURS
Physics	10 to 12
Physics 101, 102—General Physics	10
or	
Physics 106, 107, 108—General Physics	12
Chemistry	8 to 10
Chem. 101, 102—General Chemistry	8
or	
Chem. 107, 108—General Chemistry	10
Life Science	10
Biol. 110, 111—Principles of Biology	10
Descriptive Statistics or Educational Measurement	3 to 4
Select one of the following:	
Agron. 340—Introduction to Applied Statistics	4
Biol. 371—Quantitative Biology	4
Ed. Psych. 390—Elements of Educational Statistics	3
Ed. Psych. 391—Construction and Use of Tests in Teaching, or 392—Introduction to the Principles of Measurement	4
Math. 161—Statistics	3
Psych. 235—Statistical Methods in Psychological Research	4

One of the following options must be completed:

Option A. *Chemistry*

Twenty-two to twenty-four hours in chemistry beyond the Core Courses.

For selection of courses refer to the College of Liberal Arts and Sciences Curriculum Preparatory to the Teaching of Chemistry, page 387.

Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately seventy semester hours.

The completion of a teacher education minor in either mathematics, physics, or biology is recommended.[1,2]

Option B. *Physics*

Nineteen hours in physics beyond the Core Courses.

For selection of courses refer to the College of Liberal Arts and Sciences Curriculum Preparatory to the Teaching of Physics, page 403.

Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately seventy semester hours.

The completion of a teacher education minor in either mathematics or chemistry is recommended.[1,2]

Option C. *Earth Science*
Thirty-two hours in earth science beyond the Core Courses
For selection of courses refer to the College of Liberal Arts and Sciences Curriculum Preparatory to the Teaching of Earth Sciences, page 390.
Additional electives in science and courses related to science teaching must be taken to bring the total of such work to approximately seventy semester hours.
The completion of a teacher education minor in biology, mathematics, or one of the physical sciences is recommended.[1,2]

NOTES

[1] Courses related to science teaching may include mathematics, history of science, philosophy of science, anthropology, experimental psychology, physical geography, and science education exclusive of the education courses specifically required for certification. The following is a listing of courses and areas of study that deserve special consideration: Anthropology 102, 103, 240, 343, 356; Geography 378; Geology 370; History 347, 348, 349; Philosophy 170, 327, 328; Computer Science; Computer Assisted Instruction; Independent Study.
[2] Minimum state requirements for teaching of biology or physical science may be satisfied by a minimum of twenty-four semester hours of work, appropriately distributed, in the field. Minimum state requirements for teaching of mathematics may be satisfied by three appropriately distributed 300-level courses beyond a basic calculus sequence.

Specialty in Russian

See "Specialty for Teaching Russian in Both High School and Elementary School" on page 406. Note in particular the substitution suggested for students who wish to prepare for teaching Russian in the elementary school.

Admission to this specialty requires the completion of Russian 104 or its equivalent.

		HOURS
Teacher Education Major in Russian including courses taken in the first two years		44
Russian 115 or 116—Russian Literature in Translation	3	
Russian 211–212—Oral Russian	4	
Russian 213–214—Russian Composition	4	
Russian 215–216—Introduction to Russian Literature	6	
Russian 280—Teachers' Course	2	
Russian 308—Russian Phonetics and Pronunciation	3	
Russian 326—Masterpieces of Russian Literature (or Russian 321, 322, 323, 324, 325, Readings in Russian Literature)	3	
Russian Elective	3	
Teacher Education Minor		20 to 24
The second teaching field must be selected from among the approved teacher education minors listed on page 255.		
Electives		8 to 11
Advanced Russian courses not included in the minimum program are recommended, particularly for students who have completed basic Russian courses in secondary school. Slavic 382—Language Laboratory Techniques, is recommended for students deficient in the skill necessary to operate a language laboratory efficiently. History and Philosophy of Education 303—Comparative Education, is recommended. Other courses may be chosen from major or minor fields, or other areas of interest.		
Total including general education and professional education credits		at least 123

Specialty in Social Studies

This specialty offers preparation for teachers of high school and junior high school courses in history, sociology, economics, political science, geography, and general social studies.

Two arrangements are provided for completing the major and minor requirements: *Option A* requires a social studies major of forty-one hours and a minor of twenty to twenty-four hours in an approved teaching field outside the social studies (English,

a foreign language, mathematics, etc.). The major under Option A consists of two parts: (1) twenty hours in history and (2) twenty-one hours in economics, geography, political science, and sociology distributed to provide one course in each of the four fields and some concentration in two of the fields.

Option B requires a social studies major of thirty-six hours and a minor of twenty hours which is also within the social studies field. The major under Option B consists of two parts: (1) sixteen to twenty-one hours in history and (2) fifteen to twenty hours in economics, geography, political science, and sociology distributed to provide courses in three of the four fields. The twenty-hour minor is taken entirely in one of the areas of economics, geography, political science, or sociology which has not been included in the major.

The choice of options will be selected in consultation with an adviser. Under each option at least one course in American history and one in American government is required.

Specialty in Spanish

See "Specialty for Teaching Spanish in Both High School and Elementary School" on page 409. Note in particular the substitution suggested for students who wish to prepare for teaching Spanish in the elementary school.

Admission to this specialty requires the completion of Spanish 104 or its equivalent.

	HOURS
Teacher Education Major in Spanish including courses taken in the first two years	43
Spanish 211–212—Intermediate Composition and Conversation	6
Spanish 215—Spoken Spanish	4
Spanish 221—Spanish Drama and Poetry of the 20th Century	3
Spanish 222—Spanish-American Prose Fiction of the 20th Century	3
Spanish 280—Teachers' Course	2
Spanish 305—Romanticism and Realism in 19th Century Spanish Literature, or Spanish 306—The Generation of 1898	3
Spanish 332—La Cultura Hispanica: Hispanoamerica	2
Spanish 351—Phonetics, and Spanish 352—Syntax	4
Teacher Education Minor	at least 20
The second teaching field must be selected from among the approved teacher education minors listed on page 255.	
Electives	13 or 12
Advanced Spanish courses not included in the minimum program are recommended particularly for students who have completed basic Spanish courses in secondary school. Spanish 382—Language Laboratory Techniques, is recommended for students deficient in the skill necessary to operate a language laboratory efficiently. History and Philosophy of Education 303—Comparative Education, is recommended. Other courses may be chosen from major or minor teaching fields, or other areas of interest.	
Total including general education and professional education courses	at least 123

Curriculum in Business Education

For the Degree of Bachelor of Science in Business Education

All students complete requirements as outlined in prescribed courses in business education, general education, professional education, one or more areas of specialization, and general electives. Each student must complete the requirements of one area of specialization. If he chooses, he may also complete a second area of specialization or one of the approved teacher education minors as outlined on page 255. A minimum of 126 hours of credit, excluding physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

GENERAL EDUCATION COURSES

	HOURS
Humanities (approved two-course sequence)[1]	6 or 8
Introduction to Psychology	4 4
Natural Science (approved two-course sequence including a laboratory course)[1]	6 or 8
Physical Education	(4) (4)
Social Science Sequence[2]	6 or 8
Speech 111 and 112—Verbal Communication, or Rhet. 101 and 102—Rhetoric and Composition and Speech 101—Principles of Effective Speaking	8 or 9
Total	30 to 37

PRESCRIBED COURSES IN BUSINESS EDUCATION

Accy. 101—Principles of Accounting, I	3
Accy. 105—Principles of Accounting, II	3
Econ. 102 and 103—Principles of Economics, I and II	6
Econ. 171—Introductory Economic Statistics, or Econ. 172—Economic Statistics, I	3
Math. 124 and 134—Introductory Analysis for Social Scientists	7
Rhet. 251—Business Writing	3
Total	25

NOTES

[1] Sequences in natural science and humanities must be selected from the approved list of general education sequences prescribed for students in the College of Education, unless such sequences are otherwise included in the major field.

[2] Must include one course in United States history and one course in political science which covers both Illinois and federal constitutions. History 152 and Political Science 150 are recommended, thereby satisfying a requirement for certification.

SUGGESTED AREAS OF SPECIALIZATION

Each student will declare his area of specialization no later than the first semester of his junior year, unless he enters the curriculum after that time. The student's proposed program will be outlined in detail and filed in the office of the Vocational and Technical Education Department and will be available to the Credentials Analyst in Room 120 Education Building. The following lists of specific courses are provided as a guide for students and advisers. Substitution may be made with the approval of the adviser. Each student is expected to complete the minimum program in the area of specialization which he declares.

ACCOUNTING—BOOKKEEPING

	HOURS
Accy. 108—Intermediate Accounting	3
Accy. 166—Cost Accounting	3
Accy. 274—Basic Federal Income Tax Accounting	3
C.S. 105—Introduction to Computers and Their Application to Business and Commerce	3
Electives in Accounting	6 to 8
Bus. Adm. 210—Management and Organizational Behavior	3
Vo. Tech. Ed. 270—Technic and Curriculum Development for Teaching Secretarial and Office Practice Subjects[1]	3
Vo. Tech. Ed. 271—Technic and Curriculum Development for Teaching Data Processing and Office Machines[1]	3
Total	27 to 29

DATA PROCESSING

Accy. 108—Intermediate Accounting, or Accy. 166—Cost Accounting	3
Accy. 325—Accounting System Design	3
C.S. 105—Introduction to Computers and Their Application to Business and Commerce	3
Econ. 173—Economic Statistics, II	3
Electives in Computer Science	7 to 9
Bus. Adm. 200—The Legal Environment of Business	3
Bus. Adm. 247—Introduction to Management	3
Vo. Tech. Ed. 271—Technic and Curriculum Development for Teaching Data Processing and Office Machines[1]	3
Total	28 to 30

ECONOMICS

Econ. 173—Economic Statistics, II	3
Econ. 300—Intermediate Micro-Economic Theory	3
Econ. 301—Intermediate Macro-Economic Theory	3
Electives in Economics	7 to 9
Bus. Adm. 247—Introduction to Management	3
Select three of the five courses listed:	9
Econ. 214—Government Finance and Taxation	
Econ. 240—Labor Problems	
Econ. 255—Comparative Economic Systems	
Econ. 313—Economics of Consumption	
Fin. 254—Introduction to Business Financial Management	
Total	28 to 30

MARKETING AND DISTRIBUTIVE EDUCATION

Elective in Marketing	3 or 4
Bus. Adm. 200—The Legal Environment of Business	3
Bus. Adm. 202—Principles of Marketing	3
Bus. Adm. 212—Principles of Retailing	3
Bus. Adm. 337—Advertising and Sales Management	3
Vo. Tech. Ed. 270—Technic and Curriculum Development for Teaching Secretarial and Office Practice Subjects[1]	3
Vo. Tech. Ed. 271—Technic and Curriculum Development for Teaching Data Processing and office Machines[1]	3
Vo. Tech. Ed. 382—Cooperative Vocational and Technical Education Programs (Business Education Section)	4
Vo. Tech. Ed. 385—Problems in Concurrent-work Education	4
Total	29 or 30

SECRETARIAL-OFFICE PRACTICE

Elective in Industrial Administration or Finance	3 or 4
Fin. 254—Introduction to Business Fiancial Management	3
Bus. Adm. 200—The Legal Environment of Business	3
Bus. Adm. 247—Introduction to Management	3
Bus. Adm. 248—Personnel Management	3
Vo. Tech. Ed. 270—Technic and Curriculum Development for Teaching Secretarial and Office Practice Subjects[1]	3
Vo. Tech. Ed. 271—Technic and Curriculum Development for Teaching Data Processing and Office Machines[1]	3
Vo. Tech. Ed. 382—Cooperative Vocational and Technical Education Programs (Business Education Section)	4
Vo. Tech. Ed. 385—Problems in Concurrent-work Education	4
Total	29 or 30

PROFESSIONAL EDUCATION COURSES

Hist. Phil. Ed. 201—Foundations of American Education	2
Ed. Prac. 242—Educational Practice in Secondary Education	5
Ed. Prac. 250—School and Community Experiences	2
Ed. Psych. 211—Educational Psychology	3
Sec. Ed. 241—Technic of Teaching in the Secondary School	5
Vo. Tech. Ed. 240—Principles of Vocational and Technical Education	2
Total	19

GENERAL ELECTIVES (UP TO 24 HOURS)

General electives will be selected as needed to meet the minimum requirement of 126 hours for graduation. These may include courses to develop depth to respond to the diverse interests of the student.

NOTES

[1] Students who wish to teach in special fields requiring essential competencies in an applied area such as typing, shorthand, and office machines must obtain an ecceptable level of proficiency prior to enrolling in the program or outline a plan whereby these skills may be obtained prior to enrollment in Vocational and Technical Education 270 and 271 and student teaching. *Proficiency levels are validated by the business education faculty through examination.*

Curriculum in Early Childhood Education

For the Degree of Bachelor of Science in Early Childhood Education

This four-year curriculum is designed to meet the requirements for teaching in the nursery school and kindergarten-primary grades in Illinois schools. A minimum of 124 semester hours of credit excluding military science and the first two years of physical education, is necessary for graduation under this curriculum.

For admission to the curriculum, freshmen must meet the requirements for admission set forth in the Admissions Chart on page 41 of this catalog. In general, admission of transfer students, either from other institutions or from other colleges of the University of Illinois, is limited to students having a grade-point average of 3.5 or higher, in terms of the University of Illinois grading system. Admission of transfer students whose scholastic average is below 3.5 is considered on petition in individual cases. Petitions for admission are considered by a committee which makes recommendations to the Dean of the College of Education.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS
Fine and Applied Arts	
Art 203	2
Elem. Ed. 337	3
Music 240 and 241	6
Total Required	11
Health and Physical Education	
Required Physical Education	4
P.E.W. 220 or P.E.M. 220	2
Total Required	6
Language Arts	
Rhet. 101, 102, and Speech 101 (or 141), or 111 and 112	8 or 9
Lib. Sci. 303	3
Literature	6
Total Required	17 or 18

Mathematics	
Math. 202	5
Natural Science	16
Biological Science	8
Biol. 100 and 101 or Bot. 100 and Zool. 104 or another approved biological science sequence.	
Physical Science	8
(Mathematics is not acceptable as a physical science.) L.A.S. 141 and 142 or Geol. 101 and 102 or Geog. 102 and 103 or any other approved physical science sequence.	
Psychology 100	4
Social Science	14 or 15
Sociol. 151 and 152 or Hist. 111 and 112, or Phil. 103 and 104 (or other approved sequence)	8
Hist. 151, 152, 261, or 262	3 or 4
Pol. Sci. 150	3
Professional Courses in Elementary Education	33
(235, 237, 333, 334, 335, 336), Hist. Phil. Ed. 201, Ed. Psych. 236 or Psych. 216, or Home Econ. 105, and Ed. Prac. 232 and 238	
Area of Concentration	12
Twelve semester hours of additional credit concentrated in one of the established academic subject areas in the early childhood education curriculum are required of all students. An area of concentration in Child Development and Family Relations in the Department of Home Economics is also permissible. At least six semester hours must be numbered above 200. Students may petition to take less than six semester hours at the 200–300 level following consultation with an adviser. The required 12 semester hours must be in addition to the basic requirements in the area.	
Electives to complete total of 128 semester hours	10
Total required including required physical education	128

Curriculum Preparatory to Elementary School Teaching

For the Degree of Bachelor of Science in Elementary Education

This four-year curriculum is designed to meet the requirements for teaching in the elementary and kindergarten-primary grades in Illinois schools. A minimum of 124 semester hours, excluding military science and the first two years of physical education, is necessary for graduation under this curriculum.

For admission to the curriculum, freshmen must meet the requirements for admission set forth in the Admissions Chart on page 41 of this catalog. In general, admission of transfer students, either from other institutions or from other colleges of the University of Illinois, is limited to students having a grade-point average of 3.5 or higher, in terms of the University of Illinois grading system. Admission of transfer students whose scholastic average is below 3.5 is considered on petition in individual cases. Petitions for admission are considered by a committee which makes recommendations to the dean of the College of Education.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS
Fine and Applied Arts	11
Art 203	2
Elem. Ed. 337	3
Music 240 and 241	6
Health and Physical Education	6
Physical Education (required)	4
P.E.M. or P.E.W. 220	2
Language Arts	17 or 18
Rhet. 101, 102, and Speech 101 (or 141), or 111 and 112	8 or 9
Lib. Sci. 303	3
Literature	6
Mathematics	8
Math. 202	5
Math. 203	3

Natural Science	16
Biological Science (eight hours required):	
Bot. 100 and Zool. 104, or Biol. 100 and 101, or Entom. 103 and Bot. 100, or Entom. 103 and Zool. 104 (or other approved sequence)	8
Physical Science (eight hours required):	
L.A.S. 141 and 142, or an approved sequence of eight hours from astronomy, geology, physical geography, chemistry, and physics	8
(Mathematics is not acceptable as a physical science.)	
Psychology 100	4
Social Science	18 or 19
Sociol. 151 and 152, or Hist. 111 and 112, or Phil. 103 and 104 (or other approved sequence)	8
Geog. 104	4
Hist. 151, 152, 261, or 262	3 or 4
Pol. Sci. 150	3
Professional Courses in Elementary Education (230, 237, 333, 336), Ed. Psych. 236, Hist. Phil. Ed. 201, and Ed. Prac. 232	25
Area of concentration	12
Twelve semester hours of additional credit concentrated in one of the established academic subject areas in the elementary education curriculum are required of all students. At least six semester hours must be numbered above 200. Students may petition to take less than six semester hours at the 200–300 level following consultation with an adviser. The required twelve semester hours must be in addition to the basic requirements in the area.	
Electives to complete total of 128 semester hours	9 to 11

Specialty for Elementary School Librarians

This specialty is developed for those seeking preparation for teaching in the elementary grades and for serving as elementary school librarians. A minimum of 124 semester hours plus any additional hours required to complete the specialty for librarians, not counting military science and required physical education, is required for this program. On completion of the Bachelor of Science in Elementary Education and this specialty, the student is qualified for the Illinois standard Elementary School Certificate.

Students pursuing this specialty must have completed two years of a foreign language in high school. The same foreign language is to be studied in the University in order to meet the program requirements of the specialty indicated below. Students entering the program without the required high school foreign language must complete sixteen semester hours in one foreign language rather than eight hours as indicated below.

The specialty for Elementary School Librarians requires the completion of the program for the Bachelor of Science in Elementary Education with the following modifications:

The following courses are to be added to the general program in elementary education described on page 274:

Foreign Language, eight semester hours continuing the language studied in high school. Library Science, fifteen semester hours (to yield a total of eighteen semester hours of Library Science, since Library Science 303, three semester hours, is required in the general program) including Library Science 201, 204, 255, 258, 308, three semester hours each. Educational Practice 238, three semester hours, student teaching for elementary school librarians.

The following requirements are to be deleted from the general program in elementary education: area of concentration, twelve semester hours; general electives, ten to twelve semester hours.

Curriculum in Technical Education Specialties

For the Degree of Bachelor of Science in Industrial Education

The curriculum outlined below requires a minimum of 128 hours for graduation (exclusive of the first two years of military training and physical education). A student who completes this curriculum will be qualified to teach his specialty at one or more of the following levels: elementary school, secondary school, technical institute, junior col-

lege, or industrial training program. Examples of technical education specialties include: electronics, machine tool, avionics, machine tool drafting, architectural drafting, construction, as well as industrial arts.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

SUMMARY

	MINIMUM HOURS
General Requirements	35 to 43
Professional Education Requirements	20
Technical Education Speciality Requirements	48
General Electives	25 to 17
Total	128

GENERAL REQUIREMENTS COMMON TO ALL TECHNICAL EDUCATION SPECIALTIES

	HOURS
Humanities[1]	6 to 8
Mathematics 111 or 112 and Mathematics 114	5 or 7
Natural Sciences (physical or biological)[1]	6 to 8
Physical Education	(4)
Introduction to Psychology	4
Rhetoric 101, 102 and Speech 101, or Speech 111, 112	8 or 9
Social Science Sequence Electives[2]	6 to 7
Total	35 to 43

NOTES

[1] Sequences in Natural Science and Humanities must be selected from the approved list of general education sequences prescribed for students in the College of Education, unless such sequences are included in the major field.

[2] Students in teacher education curricula must select courses to fulfill certification (requirements in political science and United States history. The course in political science must include instruction on the constitutions of Illinois and the United States. (History 152 and Political Science 150 or 191 are recommended.)

PROFESSIONAL EDUCATION REQUIREMENTS COMMON TO ALL TECHNICAL EDUCATION SPECIALTIES

	HOURS
Educational Practice 242	5
Educational Psychology 211	3
History and Philosophy of Education 201	2
Vocational-Technical Education 240 or 381	2 or 3
Vocational-Technical Education 383	3
Vocational-Technical Education 388 or Secondary Education 241	3 or 4
Vocational-Technical Education 101 or Educational Practice 250 (if required to make total of 20 hours)	(2)
	20
Total common requirements	55 to 63

TECHNICAL EDUCATION SPECIALTY REQUIREMENTS

The technical education specialties provide opportunities for planning individual programs of study under the supervision of a faculty adviser qualified in the student's special field of interest. Examples of specific programs are on file with the Vocational and Technical Education Department to aid in program planning.

SUPERVISED OCCUPATIONAL EXPERIENCE

Cooperative arrangements have been made by the University for supervised occupational experience of technical education specialty students while employed in selected employment locations. This program is designed for students preparing to become certi-

fied vocational or technical specialty instructors, for students preparing for employment in training departments maintained by business or industrial organizations, or for students preparing as industrial arts teachers through selected occupational experiences.

Vocational and technical certification requires up to a total of twenty-four months of full-time appropriate supervised occupational experiences in an approved location under a cooperative agreement. Other technical-education-specialty students may gain specialized experiences available only within an operating business or industrial establishment. Students may accumulate up to seventeen semester hours of credit through registration in Vocational-Technical Education 189—Supervised Occupational Experience.

Cooperative arrangements have been established with some junior colleges whereby registration in this program may be accomplished after completion of the freshman year.

Curriculum Preparatory to Teaching Deaf and Hard-of-Hearing Children

For the Degree of Bachelor of Science in the Education of the Deaf

A student who wishes to enter the curriculum for the education of the deaf and the hard-of-hearing must (1) rank in the upper 25 per cent of his high school graduating class or, if a transfer student, must have an average of at least 3.5. A personal interview with a staff member of the College of Education is required.

A minimum of 124 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	19 OR 20 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Arts and Crafts[1]	2	Biol. 101—Biological Science[2]	4
Biol. 100—Biological Science[2]	4	Music 240—Music for Elementary Teachers	3
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Psych. 100—Introduction to Psychology	4
Speech 101—Principles of Effective Speaking[3]	3	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1
Electives[4]	6	Electives[4]	2

SECOND YEAR	17 HOURS		18 OR 19 HOURS
Hist. Phil. Ed. 201—Foundations of American Education	2	Hist. 152—History of the United States, 1865 to the Present	4
L.A.S. 161—Literature and Fine Arts[5]	4	L.A.S. 162—Literature and Fine Arts[5]	4
Pol. Sci. 150—American Government: Organization and Powers	3	Sociol. 152—The Study of Society, II[6]	4
Sociol. 151—The Study of Society, I[6]	4	Physical Education	1
Spec. Ed. 117—Exceptional Children	3	Electives[4]	5 or 6
Physical Education	1		

THIRD YEAR	17 HOURS		17 HOURS
Ed. Psych. 236—Child Development for Elementary Teachers[7]	3	Elem. Ed. 237—Child Development for Elementary Teachers[7]	3
Elem. Ed. 233—Classroom Programs in Childhood Education	2	Math. 202—Mathematics for Elementary Teachers	5
Speech 301—General Phonetics	3	Spec. Ed. 317—Psycho-Social Educational Aspects of Deafness	3
Speech 375—Speech Science, I	3	Speech 393—Aural Rehabilitation	3
Speech 385—Speech Pathology, I	3	Speech 395—Audiometry	3
Speech 391—Introduction to Hearing Disorders	3		

FOURTH YEAR	18 HOURS	17 OR 18 HOURS
Ed. Prac. 220d—Educational Practice in the Education of Exceptional Children	3	5
Ed. Prac. 232—Educational Practice in Elementary Education	3	
Elem. Ed. 231—Technic of Teaching in the Elementary School	3	
Spec. Ed. 319—Special Education of the Deaf, I	5	
Spec. Ed. 320—Special Education of the Deaf, II		5
Spec. Ed. 324—Mental and Educational Measurement of Exceptional Children		3
Electives[4]	4	4 or 5

NOTES

[1] Students may satisfy this requirement by taking any two of the following: Vocational and Technical Education 188, Art 190 or 203, Elementary Education 337.
[2] Any two of the following may be substituted: Botany 100; Physiology 103–106; Zoology 104.
[3] Students who take Speech 111 and 112 are not required to take Speech 101.
[4] Electives are to be selected in consultation with the adviser. A maximum of forty-four hours in education may be allowed toward graduation.
[5] Liberal Arts and Sciences 161 and 162 are waived for students who have completed English 101, 102, and 103.
[6] Sociology 151 and 152 are waived for students who have completed Sociology 100 and one additional three-hour course in sociology.
[7] Psychology 216 may be taken in lieu of either Educational Psychology 236 or Elementary Education 237.

Curriculum Preparatory to Teaching Mentally Handicapped Children

For the Degree of Bachelor of Science in the Education of Mentally Handicapped Children

A student who wishes to enter the curriculum for the education of the mentally handicapped must (1) rank in the upper 25 per cent of his high school graduating class or, if a transfer student, must have an average of at least 3.5. A personal interview with a staff member of the College of Education is required.

A minimum of 124 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR FIRST SEMESTER	16 TO 19 HOURS	SECOND SEMESTER	15 TO 17 HOURS
Arts and Crafts[1]	5 or 6	Biol. 101—Biological Science[2]	4
Biol. 100—Biological Science[2]	4	Psych. 100—Introduction to Psychology	4
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Speech 101—Principles of Effective Speaking[3]	3
Electives	3 or 4	Physical Education	1
		Electives	2 or 3

SECOND YEAR	15 TO 17 HOURS		15 HOURS
L.A.S. 161—Literature and Fine Arts[4]	4	Hist. 152—History of the United States, 1865 to the Present	4
Pol. Sci. 150—American Government: Organization and Powers	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Sociol. 151—The Study of Society, I[5]	4	L.A.S. 162—Literature and Fine Arts[4]	4
Spec. Ed. 117—Exceptional Children	3	Sociol. 152—The Study of Society, II[5]	4
Physical Education	1	Physical Education	1
Elective	0 to 2		

THIRD YEAR	17 HOURS		16 HOURS
Ed. Psych. 236—Child Development for Elementary Teachers, or Psych. 216—Child Psychology	3	Elem. Ed. 233—Classroom Programs in Childhood Education	2
Music 240—Music for Elementary Teachers	3	Elem. Ed. 336—Primary Reading	3
Psych. 250—Psychology of Personality	3	Math. 202—Mathematics for Elementary Teachers	5
Speech 208—Speech and Hearing Problems in the Classroom	3	Electives	6
Electives	5		

FOURTH YEAR	16 HOURS		14 HOURS
Ed. Prac. 220a—Educational Practice in the Education of Exceptional Children[6]	3	Ed. Prac. 220c—Educational Practice in the Education of Exceptional Children	5
Ed. Prac. 232—Educational Practice in Elementary Education[6]	3	Spec. Ed. 323—Psychology and Education of the Mentally Handicapped, II	3
Elem. Ed. 231—Technic of Teaching in the Elementary School	3	Spec. Ed. 324—Mental and Educational Measurement of Exceptional Children	3
Spec. Ed. 322—Psychology and Education of the Mentally Handicapped, I	3	Electives[7]	3
lectives[7]	4		

NOTES

[1] Students may satisfy this requirement by taking Vocational and Technical Education 188, and a second course selected from the following: Art 190, Art 203, Elementary Education 337. This requirement may be fulfilled any time during the first three years.

[2] Any two of the following may be substituted: Botany 100; Physiology 103–106; Zoology 104.

[3] Students who take Speech 111 and 112 are not required to take Speech 101.

[4] Liberal Arts and Sciences 161 and 162 are waived for students who have completed English 101, 102, and 103.

[5] Sociology 151 and 152 are waived for students who have completed History 111 and 112, or Sociology 100 and one additional three-hour course in sociology.

[6] Educational Practice is with normal elementary children and with mentally retarded elementary children.

[7] Electives are to be selected in consultation with the adviser.

The College of Engineering encourages close relations between faculty and students. This class in the history of engineering is developing teacher-student discussion techniques through the use of video tapes.

College of Engineering

The College of Engineering aims to prepare men for professional work in engineering and for responsible positions of a technical and semitechnical character in industry, commerce, education, and government. The college provides training in the mathematical and physical sciences and their applications to the design, construction, and operation of industrial plants and public and private works of all kinds. The curricula, though widely varied and specialized, are built on a general foundation of scientific facts and theories applicable to many different fields. Work in the classrooms and laboratories is correlated by practical problems which the students solve by methods similar to those of practicing engineers.

While each student pursues a curriculum of his own choice, according to the field of his particular interest, all the students take certain courses in common. Basic courses in mathematics, chemistry, physics, rhetoric, computer science, and engineering graphics are required in the first two years. Although the curricula are progressively specialized in the third and fourth years, each student is required to take some courses outside his chosen field.

Nontechnical courses are included in each curriculum; they may be required or elective. Many of the nontechnical courses satisfy the broad objectives of the humanities and social science requirements of engineering curricula, in particular that of making the student keenly aware of the urgent problems of society and that of developing a deeper appreciation of the cultural achievements of man. The humanities and social science courses are usually drawn from the liberal arts and sciences, economics, and certain approved courses in fine and applied arts. Students who are interested in a broader cultural background should consider the combined engineering-liberal arts and sciences program described on page 293.

All departments in this college offer work leading toward graduate degrees including the Department of General Engineering which, in cooperation with other departments, offers graduate study in engineering design. Some of the advanced undergraduate courses in each department may be taken for graduate credit. Detailed information on graduate programs may be obtained from the catalog of the Graduate College.

The Engineering Library on the first three floors of Engineering Hall contains the reference books, periodicals, catalogs, and technical publica-

tions which the students need constantly, and also provides for general reading and private research.

DEPARTMENTS AND CURRICULA

The College of Engineering includes the Departments of Aeronautical and Astronautical Engineering, Ceramic Engineering, Civil Engineering, Electrical Engineering, General Engineering, Mechanical and Industrial Engineering, Metallurgy and Mining Engineering, Physics, and Theoretical and Applied Mechanics. The undergraduate curricula described below are administered by these departments. The work in chemical engineering is administered by the College of Liberal Arts and Sciences. The curriculum in agricultural engineering is administered jointly by the Colleges of Agriculture and Engineering. Architecture and the engineering option in architecture are administered by the College of Fine and Applied Arts.

Both undergraduate and post-baccalaureate programs in the teaching of engineering technology are administered by the College of Engineering through the Urbana Champaign Council on Teacher Education, with the full cooperation of the College of Education.

Courses in engineering graphics are given for students in all curricula and are administered by the Department of General Engineering.

Each student entering the College of Engineering declares his choice of a curriculum. Except for the curriculum in the teaching of engineering technology, all first-year students follow the common programs for freshmen shown on pages 299 and 300.

At the beginning of any semester of the first two years, any student may change from one curriculum to another without loss of much, if any, credit for the work he has done. Students who are not far advanced in this college may transfer to other colleges without much loss of time in their progress toward degrees.

Thesis. A senior of high standing in any curriculum, with the approval of the department concerned, may substitute for one or more technical courses an investigation of a special subject and write a thesis on his results.

Special Curricula. Students of high scholastic achievement, with exceptional aptitudes and interests in special fields of engineering and its application, may be permitted to vary the course content of the standard curriculum in order to emphasize some phases not included or not encompassed by the usual course substitution and selection of electives. These unwritten curricula, however, include all the fundamental courses of the standard curricula, the variations being made mainly in the so-called "applicatory" portions of the standard curricula of the college. The program of studies of each student permitted to take such a special curriculum must be approved by a committee of the college, in consultation with the head of the department in which the student is registered, and with a faculty member of the college. This faculty member automatically becomes the student's adviser in charge of registration and other matters pertaining to the approved program.

Aeronautical and Astronautical Engineering. Progress in the development of airplanes, missiles, and space vehicles presents challenging opportunities for young men and women interested in research, development, design, and teaching. A strong foundation in mathematics, physics, and the engineering sciences is required of those persons who will contribute to future progress and who will grow intellectually with the advances in aeronautical and astronautical engineering. The curriculum in this field offers students an opportunity to develop this foundation and acquire quantitative knowledge of divisions of the professional fields such as aerodynamics, flight and orbital mechanics, guidance, automatic controls, ballistics, flight vehicle systems engineering, propulsion, aeroelasticity, and structural mechanics. Emphasis is placed on the fundamental principles involved in aeronautical and astronautical engineering so that graduates will be prepared to contribute to this rapidly changing and growing field with its wide variety of engineering applications. This emphasis results in effective preparation for a number of other engineering fields.

Experimental investigations in many areas of aeronautics and astronautics may be conducted with facilities available in the department. Wind tunnels and shock tubes are used to investigate a wide variety of aerodynamic and heating problems encountered in the speed range from vertically rising airplanes to space vehicles. Conditions encountered during entry into the earth's atmosphere of a space vehicle are simulated in a low-density, hypervelocity wind tunnel. Interaction of magnetic fields with electrically con-

ducting gases may be studied in the magnetogasdynamic laboratory. Problems met in the development of jet propulsion systems required for high-speed flight may be examined in the department's propulsion laboratory. Experimental investigations of the behavior of structures subjected to static and dynamic loads including the response to mechanical and acoustical environments my be undertaken by students in the structural mechanics laboratory. The various types of experiments offer students opportunities to study and use a wide variety of laboratory instruments based on fluid, mechanical, electronic, and optical principles.

Agricultural Engineering. Agricultural engineering is the application of engineering principles to the solution of problems in agriculture. However, such a brief statement can not convey the breadth and depth of the profession. With the trend toward more complex machines and automation, agricultural engineers find challenging opportunities, ranging from development of environmental control systems for livestock production to the design of harvesting machines for fruits and vegetables. In addition they have almost unlimited opportunities in both type and place of work. Rewarding positions can be found near home or in some distant land.

Agricultural engineering is an applied science. Preparation involves study of the physical sciences and basic engineering principles, and an appreciation for agriculture. A farm background can be helpful, but is not required. Interest and ability in physics, mathematics, and related sciences are important.

Many graduates are engaged in farm tractor and machinery design, development, design and with adapting new materials to farm structures. Some work with problems of providing a satisfactory environment for the livestock or crop to be housed inside the building, others, with basic design and development problems related to the structural framework. Still others work with problems of planning the building arrangement to provide for efficient operation of the enterprise which is housed in the building.

Soil and water area problems provide excellent opportunities for many young engineers. An increasing awareness of the necessity for the planned use of our water and soil resources on every level of activity—county through international—has set new standards for the engineers who must cope with problems of water shortage, flood control, and the optimization of agronomic production through more efficient drainage, irrigation, and erosion control practices. The interdisciplinary background of the agricultural engineer serves him well in dealing with these problems, each of which often involves a multiplicity of public interests. For men capable of applying new concepts in hydraulics, hydrology, and soil-plant-water relationships, employment opportunities exist with federal operations and research agencies, private consulting firms, equipment manufacturers, and consulting agencies for foreign development programs.

By combining College of Engineering and College of Agriculture requirements in a five-year program, the student may obtain bachelor's degrees in both engineering and agricultural science (see page 199). For this five-year program the student first registers in the College of Agriculture.

Ceramic Engineering. Ceramic engineering is a discipline in engineering directly involved with the solid state articles of commerce and science called the ceramic materials. These materials are the inorganic, nonmetallic forms of matter that comprise the ceramic industries. Modern developments in materials engineering and research have resulted in many new ceramic materials as well as a vastly greater use of ceramic materials and products. The traditional ceramic industries such as the glass industry, or refractories, abrasives, cements, and structural products industries are joined by the broadening industries of electronic and magnetic ceramics and nuclear ceramics.

Ceramic engineering is a materials curriculum. With a basic sequence of courses in chemistry, physics, and mathematics, the curriculum leads the student through related engineering and science courses concerned with ceramics. These subjects involve crystal structure, physical chemistry, kinetics, and thermodynamics, as well as the technology of ceramic materials and products. Identification and physical description of ceramic materials, the processing of ceramic materials, and the properties of ceramic products are topics of instruction. In this balanced program, the student completes approximately one-fourth of his academic experience in ceramic engineering courses. The remainder of the program involves the basic sciences, humanities and social science electives, engineering science courses, and technical and free electives.

Instruction in ceramic engineering has prepared the ceramic engineering graduate (since 1911) for responsible positions in industry, government, and education; in research on new materials; in manufacturing supervision and administration; in product and process development; or in technical sales. Graduates have been involved with positions along the entire spectrum of materials engineering, from the beneficiation of begin-

ning materials, through the product development and research involving the synthesis of new materials and products, to the manufacturing and technical marketing of the products. Since so many ceramic materials are processed or placed into useful service at very high temperatures (above 1000°C), ceramic engineers are concerned with engineering properties of ceramic products at these elevated temperatures. They are also involved with industrial furnace design and operations, high-temperature aerospace materials applications, and high-temperature nuclear ceramic fuel synthesis and nuclear power plant materials.

The Ceramics Building provides laboratories for instruction and research, offices, and classrooms. A Ceramics Library consisting of technical periodicals and books on ceramic materials science and engineering is maintained. The laboratories include equipment for the production, containment, and control of high-temperature conditions, and unique analytical equipment used for the study of high-temperature reactions and properties. A large furnace laboratory houses special kilns and high-temperature furnaces and controls. In the Ceramics Building there are special research and instruction laboratories including a materials processing laboratory, electronic ceramics laboratory, glass laboratory, porcelain enamels laboratories, and the pyrometry laboratory.

Senior students in ceramic engineering who qualify may elect to conduct a thesis investigation.

Students who transfer into ceramic engineering after completing their sophomore year can enroll in the two sophomore ceramic engineering courses concurrently with their junior year courses.

Chemical Engineering. The Department of Chemical Engineering is within the School of Chemical Sciences, a part of the College of Liberal Arts and Sciences. The chemical engineering curriculum is designed to offer undergraduate students a broad fundamental basis in chemistry, mathematics, and physics along with training in the application of science to engineering problems. Traditionally, the emphasis in chemical engineering has been in problems dealing with research, development, and design for the chemical process industries, including applications in fine chemicals, heavy chemicals, polymers and textile fibers, petroleum and petrochemicals, drugs and pharmaceuticals. Although these interests have been maintained, the Department of Chemical Engineering has also moved to accommodate the interests of students who wish to deal with some of the newer interdisciplinary types of areas, which are becoming of increasing social consequence—such as environmental studies, transportation, or bioengineering. Students interested in areas of this type will find that the chemical engineering curriculum offers an excellent scientific and engineering background coupled with a flexibility which permits the shaping of individual programs.

The chemical engineering classrooms and laboratories are in the East Chemistry Building; and as a part of the facilities of the School of Chemical Sciences, equipment available is most modern and extensive, and of course is all available for the use of the students in the curriculum in chemical engineering. The facilities of the Department of Chemical Engineering include the three-story recently-modernized Unit Operations Laboratory, the New Process Control and Dynamics Laboratory (which is interconnected with the analog and digital computer facilities of the school), the Undergraduate Projects Laboratory, the student shop, and two computation rooms, in addition to many research laboratories. Facilities shared with the School of Chemical Sciences include, besides the analog and digital computers, a glass shop, a machine shop, two electronics shops and special laboratories for spectroscopy (IR, UV, NMR, ESR), microanalytical, mass spectrometer, high pressure, and radiocarbon, as well as the very extensive Chemistry Library.

Students in the curriculum in chemical engineering must have a general grade-point average of at least 3.5 (exclusive of physical education or basic R.O.T.C. courses) to enter courses in the School of Chemical Sciences at the junior or senior level. A transfer student, to be accepted, must have a corresponding record in the institution or institutions from which he transfers; and he must maintain a 3.5 average for his course work at the University of Illinois. Entering freshmen or transfer students without preparation in chemistry, mathematics, physics, and language may find it difficult to complete the curriculum in chemistry engineering in four years.

Civil Engineering. The civil engineering curriculum is designed to give the student the broad educational background essential to modern civil engineering practice, including both scientific fundamentals and a strong sequence in the humanities and social sciences for a better understanding of the society of which the civil engineer is a part. It provides a systematic and integrated foundation in physical and engineering sciences and mathematics, thereby permitting the rational development of engineering methods as applied to the design of bridges, buildings, dams and hydraulic structures, nuclear

installations, transportation facilities (including highways, railways, and airports), water supply and waste disposal facilities, surveying and mapping systems, and other engineering projects. The curriculum is planned to give a basic education that will enable the graduate to begin a career in any of the various fields of practice in civil engineering. It possesses sufficient flexibility to permit a student, during his last two years, to pursue a program designed to meet his individual needs and interests. A broad program, including introductory courses in the principal areas of civil engineering endeavor, may be selected with limited specialization, or, depending upon his aptitude and interests, a student may choose a specialized program in one or more specific areas.

New laboratories, computer facilities and equipment provide the department with excellent facilities to study the fundamental behavior of *structures and structural materials.* Structural components and materials used in buildings, bridges, highways, and other structures can be tested and studied under static or dynamic loads, repeated loads, and various environmental conditions. Engineering properties and characteristics of concrete, steel, bituminous materials, rock, and soils are studied and evaluated. In *soil mechanics and foundation engineering,* rock and soils are considered as engineering materials for construction of embankments and dams, as support for foundations of structures, and as media in which excavations and tunnels are made.

In *environmental engineering,* several areas of study may be pursued in civil engineering, including biological, chemical, radiological, and physical aspects of water supply and treatment; domestic and industrial waste treatment; stream pollution; solid waste collection and disposal; and air polution. Advanced equipment is available for students to study impurities in air, water, and other materials; to evaluate their effect on the environment; to derive methods of control; and to study other subjects within the sanitary engineering and sciences field.

In the area of *construction engineering and management,* advanced techniques involving electronic computers are used to forecast productivity, plan construction operations, and estimate and control costs. Systems analysis is taught to students in order that they can better recognize, define, analyze, and resolve problems common to construction practice.

Graduates in *hydraulic or hydrosystems engineering* who have majored in the hydrology, hydromechanics, and water resources areas of civil engineering are prepared to assume responsible positions in organizations doing research, analysis, and design of hydraulic systems, hydrologic projects, and hydraulic structures, as well as directing engineering planning and development of water resources projects.

Photogrammetric and geodetic engineering deals with the analysis, design, and execution of control surveys and topographical and nontopographical mapping. Geodetic surveys are used to establish mapping control, locations of utilities, and positional control for engineering constructions. Photogrammetry provides fast and economic mapping of the earth and other planets and is used by engineers and scientists as a tool for precise geometric measurements. The department's laboratories are fully quipped for both photogrammetric and geodetic measurements.

Those interested in *transportation systems* encompassing land, sea, and air may study the concepts dealing with problems common to all the modes of transportation including planning, systems design, and operations. Related transportation areas of study include materials and structural design of roadways, highway traffic engineering, or railway engineering.

Students interested in the concepts required in the design and planning of vast *civil engineering systems* will find the philosophy of the systems approach developed in a variety of courses. Introductory courses concentrate on the presentation of the systems philosophy and systems theory in the general context of civil engineering problems, and advanced courses are being developed to effect a synthesis of disciplines within civil engineering and with other university departments.

Electrical Engineering. The electrical engineering curriculum prepares men for responsible engineering positions in research, development, design, operation, sales, and administration in the fields of communication, computers, electronics, and electrical power.

Fundamental to the curriculum is basic work in mathematics and physics which is taken by the student during his first two and one-half years. Work in the Department of Electrical Engineering begins in the second semester of the second year with a basic course in electric circuits. This course must be satisfactorily completed before any of the third-year work in the department may be undertaken. Transfer students who do not have the equivalent of this prerequisite course should consider the possibility of attendance during a summer session in order to take it. They will then be able to start the full junior program in the fall semester.

The third year is devoted to studies in a common core of subject matter, that is basic to modern electrical engineering science and is a fundamental background to the needs of the future electrical engineer. In addition to the common core, studies in the social-humanistic area are required.

The fourth year of work completes the studies in the common core area and provides considerable opportunity for broadening those areas of the common core for which the student engineer has particular interest and ability. This is done through the selection of technical elective offerings in one or more of the several areas. In addition, specialization is provided for the student engineer by proper selection of a sequence of technical electives in a particular area.

The Department of Electrical Engineering has laboratories which are well equipped for the experimental solution of problems in all fields of electrical engineering. Provision is also made for graduate work in these laboratories. Facilities are available for research in most areas of electrical engineering including antennas and fields, ultrasonics, power generation, power transmission and distribution, microwave generation and propagation, network analysis and synthesis, digital and analog computers, control systems, transistors, solid-state devices, gaseous electronics, and physical electronics.

Electrical Engineering and Computer Science. This curriculum, which is listed on page 307, is a combination of the basic electrical engineering curriculum and a specialization in computer science. This specialization is accomplished by selecting specified courses which are offered by the Department of Computer Science.

Engineering Mechanics. The curriculum in engineering mechanics, offered by the Department of Theoretical and Applied Mechanics, is designed to link the sciences and engineering and to provide a good background for students interested in careers in engineering research and development. Throughout the program, special emphasis is placed on mathematics and on fundamental principles. The courses are oriented for the student to obtain great depth of understanding of the basic sciences (mathematics, physics, chemistry) and the engineering sciences (mechanics of solids, fluid flow, electrical theory, thermodynamics, material science) and to gain insight and skill in the application of these sciences to the solution of engineering problems. To provide the skills necessary for achievement in the many rapidly advancing areas of engineering such as space technology and nuclear energy, considerable emphasis is placed on the fundamental concepts involved in such related topics as stress analysis, dynamics and vibration, and the nature and behavior of engineering materials. Many advanced analytical methods are developed from the basic concepts of the sciences which have applicability and utility in research and development in all areas of engineering. Flexibility in course choice during the senior year is available to allow the student to develop a well-rounded approach to the solution of a variety of practical problems in engineering research and design.

Opportunities for professional development for engineers with this type of background are almost unlimited. Broad training enables the graduate to use a scientific approach to the solution of a variety of problems in any industrial or research organization and often leads to supervisory and administrative positions. Further, solution of engineering problems sometimes involves the weighing of more or less intangible social and economic values which are not easily considered by scientific methods. Humanistic and social studies are therefore emphasized for the purpose of rounding out the engineer's education.

Engineering Physics. The Department of Physics offers a curriculum in engineering physics designed to give students the broad and thorough training in fundamental physics and mathematics which is demanded by the increasing complexity of modern engineering science. The work of the first two years is much like that in other engineering curricula. In the last two years, advanced courses in physics and mathematics are emphasized, but there is a liberal allowance of electives which the student may use to study a particular field of engineering or other areas in which he is especially interested. The curriculum provides good preparation for the graduate study of physics.

A student in the College of Liberal Arts and Sciences may major in physics in the curriculum in physics or in the sciences and letters curriculum. See pages 363 and 371.

The Department of Physics has extensive facilities for instruction and investigation in physics. Fields of research in which graduate students and faculty work include nuclear and elementary particle physics; solid state physics including the study of metals, ionic crystals and semiconductors, magnetic resonance phenomena; low-temperature physics; surface, thin film and plasma physics; and a wide range of theoretical research in the above fields. An excellent library of books and periodicals is maintained in the Physics Building.

Environmental Engineering in Civil Engineering. Students interested in *environmental engineering in civil engineering* follow the curriculum in civil engineering, selecting suitable technical electives in the third and fourth years. This program leads to the degree of Bachelor of Science in Civil Engineering. Degrees in environmental engineering in civil engineering are offered only at the graduate level.

General Engineering. The curriculum in general engineering provides a comprehensive program in the basic sciences, engineering sciences, and in project design, with an opportunity to pursue specialized training in such areas as engineering administration, engineering marketing, computer science, environmental quality, mining engineering, and geological engineering. The student may petition to pursue any reasonable special interest which results in an organized and integrated program. Other fields of concentration selected in the past include law, mathematics, technical writing, engineering design, biology, oceanography, meteorology, wood science, etc. The program is centered around a strong core in mathematics, theoretical and applied mechanics, basic electronics, thermodynamics, and project design. Emphasis is placed upon the practice of professional engineering. The general engineering design courses are uniquely oriented to draw upon the broad engineering science background of the general engineering student and bring it to bear upon typical project designs normally performed by the practicing engineer. Therefore, an interdisciplinary approach including the basic considerations in structural and machine design, along with the consideration of economic factors, are integrated to simulate as nearly as possible a true engineering situation.

The series of project design courses referred to above prepares the graduate to participate in a wide variety of engineering responsibilities upon graduation. The amalgamation of basic design principles in one sequence of courses is an approach being taken widely by the more forward-looking schools of engineering throughout the country. There is a great industrial demand for engineers with this type of training.

For the student who wishes to obtain the advantages of highly recommended five-year program leading to degrees both in engineering and in liberal arts, general engineering is an efficient approach. For this kind of balanced curriculum, the flexibility of choice in electives presents an ideal solution to the problems of combining the humane and the technical disciplines. Increasing career opportunities for young women who enjoy mathematics and science have attracted a considerable feminine enrollment in general engineering. Such notably attractive career opportunities as project desgn, statistical analysis, computer programming, human engineering design, biological engineering, atmospheric science, and publications preparations are but a few of the rewarding programs that can be planned by a woman in the general engineering curriculum.

Engineering administration and engineering marketing are particularly attractive fields for engineers interested in pursuing careers in management and in sales engineering. The courses taken in these areas of specialization prepare the student to consider graduate study either in business administration or in marketing. Graduate work in other non-engineering areas is possible by selecting the appropriate secondary field. The strong basic engineering background also makes it possible for the graduate to enter graduate studies in the specialized fields of engineering.

The general engineering curriculum allows the student who is interested in mining to take thirty-five hours of course work in this area. These thirty-five hours include twenty hours of prescribed courses, twelve hours of related elective courses, and three hours of mining engineering project design. This will give the student a good background with which to begin practice or to enter graduate school in mining engineering.

The general engineering graduate who continues his studies for a law degree has excellent training for a position with the legal department of an engineering firm, with the engineering department of a law firm, or with a public utility. He can also serve as a patent counsel or other technically oriented attorney, either in private practice or in a large research and manufacturing organization.

Students enrolled at other colleges and universities who contemplate transferring to the Department of General Engineering at the University of Illinois are requested to communicate with the head of the department. The work being taken at the other college can then be coordinated between the two schools. Personal and individual assistance in planning a program of study is emphasized in general engineering and is given prospective, as well as registered, students from the freshman year until graduation.

Industrial Engineering. Industrial engineering is concerned with the design, improvement, and installation of integrated systems of men, materials, and equipment, drawing upon specialized knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems. Industrial

engineers are in demand by a wide variety of industries ranging from metalworking, through electrical, chemical, pharmaceutical, and food processing.

The curriculum in industrial engineering is offered by the Department of Mechanical and Industrial Engineering and provides a core of courses concerned with three principal stems in industrial engineering, namely: (1) Manufacturing Science and Production Technology; (2) Operations Research and Statistical Analysis, and (3) Work Measurement-Human Factors. Further study in any one or in all three is permissible through effective use of electives.

Because of his rather unique position in the man-machine-process complex, the industrial engineer often moves to a position of administrative responsibility. Accordingly, the curriculum is designed to provide a solid foundation in scientific principles and to prepare the student to recognize the problem, formulate it, and then solve it with the tools available.

Since the industrial engineer must deal continually with people, he must acquire an appreciation of the humanities, social sciences, behavioral sciences, and economics.

During the first two years the industrial engineering curriculum provides a strong foundation in the basic sciences (mathematics, physics, and chemistry) and an introduction to engineering principles (graphics, materials processing and production technology, mechanics, and design). In recognition of its value as a tool in the solution of engineering problems, all students not only take instruction in both digital and analog computers but also follow up with their intensive use in regular engineering lecture and laboratory courses.

The third year is concerned primarily with basic industrial engineering subjects and the engineering sciences such as design, materials behavior, an abbreviated core of thermo-science, and basic electrical engineering.

The fourth year provides for completion of the basic program with emphasis on engineering systems synthesis, case problems, and experimentation. A wide choice of technical and free electives inside and outside the department allows either for diversification or specialization.

The integrated sequence of industrial engineering courses during the third and fourth years is concerned with work methods and measurements, linear programming, operations research, industrial systems design and analysis, manufacturing process planning and design, safety considerations and human factors in industrial systems, and mathematical analysis of industrial systems or processes. The electives within the department stress application of fundamentals to the field of particular interest in greater breadth and depth as cited above. The development of engineering judgment is another important objective served by the elective courses which are chosen in consultation with the student's adviser.

While the departmental laboratories as listed under Mechanical Engineering also serve the industrial engineering curriculum, additional laboratories for work measurement and analysis, production engineering, and special research facilities are provided. These laboratories benefit from their close association with the Production Engineering Educational and Research Center (PEERC). Special services are provided by the departmental computer laboratory, the electronics construction shop, and the equipment construction shop.

The undergraduate program in industrial engineering not only enables its graduates to enter immediately into challenging professional careers but also prepares them for continuation of their formal education in pursuit of graduate degrees in engineering as well as in programs preparing for administrative careers.

Mechanical Engineering. Mechanical engineering is concerned with the theory of conversion and transmission of energy and the practical use of power processes; the kinematic, dynamic, and strength and wear considerations as well as the technological and economic aspects in the development, design, and use of machines and processes; the analysis, synthesis, and control of entire engineering systems; and the organizational and management problems confronting the mechanical engineer.

Because mechanical engineers are found in positions of technical and administrative responsibility in every branch of industry, with activities ranging from basic research, over research and development, conceptual and machine design into production and the economic evaluation of engineering tasks, their education must be aimed at giving them a solid foundation in scientific principles and preparing them to develop rational evaluations and solutions of engineering problems. To take his place as a broadly educated, professional man in society, the mechanical engineer must also acquire an appreciation for humanities, social sciences, and economics.

The mechanical engineering curriculum during the first two years provides a strong foundation in the basic sciences (mathematics, physics, and chemistry) and an introduc-

tion to engineering principles (graphics, materials processing and production technology, mechanics, and design). Because of their importance as a tool for solving engineering problems, all students not only take instruction in both digital and analog computers but also follow up with their intensive use in regular engineering lecture and laboratory courses.

The third year is devoted to fundamental subjects in mechanical engineering (thermo-sciences, design, and laboratory experimentation) and in supporting areas (basic sequences in electrical engineering, theoretical and applied mechanics, and metallurgy).

The fourth year provides for the completion of the basic program with emphasis on engineering systems synthesis and strong involvement in experimentation culminating in a senior project laboratory. A wide choice of technical and free electives inside and outside the department allows both diversification, and if desired, specialization. Meaningful sequences or combinations of individual courses can be selected by the student in consultation with his adviser.

The curriculum in mechanical engineering not only enables the B.S. graduates to enter immediately into a wide variety of engineering careers, but also gives them excellent preparation for continuing their formal education on the graduate level in pursuit of advanced degrees in engineering as well as in programs preparing for administrative careers.

The laboratories of the department are provided with modern facilities and instrumentation. As the result of the vertical organization of laboratories, instruction and research are effecively coordinated between the undergraduate and graduate programs.

Individual laboratories are available to serve areas of fundamental sciences such as thermodynamics, heat transfer and gas dynamics (the latter having extensive wind tunnel and shock tube facilities operated jointly with the Department of Aeronautical and Astronautical Engineering), combustion, fuels and lubricants, instrumentation, and controls. Other laboratories serve areas of specialized engineering applications, such as automotive engineering, power engineering, environmental engineering, bio-engineering, machine and systems design, and materials processing and utilization. Several of these laboratories contain unique facilities and equipment which make them outstanding in their respective fields.

Special services are provided by the departmental computer laboratory, the electronics construction shop, and the equipment construction shop.

Metallurgical Engineering. The field of metallurgy is concerned with the design and production of metals and alloys whose characteristics are best suited for a given application. We live in a materials-limited technology: progress in most fields does not depend on new knowledge, but on the materials which allow us to take advantage of existing knowledge. It is the principal goal of metallurgists to provide these materials.

The curriculum emphasizes that aspect of metallurgy which deals with the relation between the structure of metals and their physical and mechanical properties. This aspect of the field is called physical metallurgy and includes metallography (the study of structure by optical and diffraction techniques), testing and evaluation of properties, and the study of the effects of mechanical and thermal treatments on metals.

Metallurgy relies heavily on its roots in physics, chemistry, and thermodynamics, as well as on mathematics and the engineering sciences. The curriculum includes courses in these subjects as well as many elective choices including the social sciences and humanities. The program offers a wide selection of elective courses to permit the student to concentrate his study in an area in which he has specific career objectives.

Mining Engineering. For undergraduate curriculum, see General Engineering. Courses are offered in geophysics, rock mechanics, and mineral dressing, to advanced undergraduate students interested in engineering aspects of earth sciences and exploration for, and exploitation of, mineral deposits.

Nuclear Engineering. The University offers a program leading to the M.S. and the Ph.D. degrees in nuclear engineering. The curriculum is open to those who have an undergraduate degree in one of the established engineering disciplines, physics, mathematics, or chemistry. It is important that the undergraduate prepare himself by taking courses in atomic physics, differential equations, and advanced calculus. He may also fill in his electives with those nuclear engineering courses available to him, such as Engineering 302, Nuclear Power Engineering; Nuclear Engineering 312, Nuclear Power Economics and Fuel Management; Nuclear Engineering 321, Introduction to Controlled Thermonuclear Fusion; Nuclear Engineering 347, Introduction to Nuclear Engineering; Nuclear Engineering 349, Fundamentals of Radiation Protection; Nuclear Engineering 357, Nuclear Reactor Safeguards; Nuclear Engineering 388, Nuclear Ceramics; or Nuclear Engineering 397–398, Radiochemistry.

A 3 megawatt TRIGA Mark II training and research reactor is located on campus. The reactor provides experimental facilities of unusual flexibility for teaching and research in nuclear engineering. In addition to steady state operation, the reactor may be pulsed to 5,000 megawatts, thus opening many new research possibilities. To complement the reactor, two subcritical nature-uranium-graphite assemblies and a light-water-uranium assembly are available for student use.

In other areas of nuclear engineering, available facilities include a boiling-water heat transfer loop, a nuclear metallurgy laboratory, a radioactive waste disposal laboratory, a direct energy conversion laboratory, radiation shielding facilities, and a radiochemistry and nuclear instrumentation laboratory. Unusually complete analog and digital computing facilities are also available for nuclear engineering uses.

As a member of the Argonne Universities Association, the University of Illinois is a participant in the nuclear technology program of the Argonne National Laboratory at Argonne, Illinois. This relationship allows University of Illinois students to use the unique facilities of Argonne National Laboratory under University of Illinois faculty supervision.

Petroleum Engineering and Petrophysics. Courses are offered in petroleum engineering (reservoir mechanics) and petrophysics to advanced students interested in the engineering aspects of the rock and rock-fluid systems of the earth's crust. These courses provide a foundation for advanced work in certain areas of applied geophysics, hydrodynamics of porous media, and vibration and disintegration in rock systems. Prerequisites include differential equations, fluid mechanics, thermodynamics, and introductory geology.

Teaching of Engineering Technology. The four-year undergraduate curriculum leading to a Bachelor of Science degree in the Teaching of Engineering Technology provides the course work needed for subject matter competence; supplies the necessary background in pedagogical theory and techniques, including practice teaching; and makes possible on-the-job experience through three summers of relevant work and study under supervision in industry. Upon completion of this program the graduate qualifies for a teaching certificate issued by the Illinois Teacher Certification Board.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

The Post-Baccalaureate Certificate in the Teaching of Engineering Technology requires thirty-two semester hours of subject matter courses appropriate for teachers active in the field and with degrees in other disciplines. Candidates who have the necessary prerequisites can complete this curriculum in four eight-week summer sessions. (The program will also be scheduled for an academic year if demand is sufficient and financial support becomes available.)

Theoretical and Applied Mechanics. Besides offering an undergraduate curriculum in engineering mechanics, the Department of Theoretical and Applied Mechanics serves the college by offering to all engineering students courses in statics and dynamics, in mechanics of deformable bodies, in materials science, and in fluid mechanics.

The facilities of the department are, for the most part, housed in Arthur Newell Talbot Laboratory and are well equipped for undergraduate and graduate instruction and also for conducting many different types of research activity. The facilities are utilized for two primary purposes: (a) to gain new knowledge of the fundamental behavior of materials, members, and of physical systems, and (b) to correlate or verify the theoretical analysis of an idealized system by critical observations of the characteristic response of an experimental model or prototype. In general, the research studies undertaken are of a fundamental nature that supplement the educational efforts of the department. Some of the research is primarily theoretical and involves highly complex mathematical analyses of stresses, vibrations, fluid flow, or basic material behavior; other research involves both analysis and experiment and may include the development of new equipment or instrumentation and the interpretation and correlation of experimental data with theory.

New and challenging problems in deformation and fracture of metals and nonmetallic structural materials are investigated in the department's fracture laboratory. Concepts of the structure of the materials and hypotheses of the mechanisms of deformation and fracture are employed to formulate theories of behavior of the materials subjected to various complex environments. Load histories may include rapid or slowly increasing loads as well as a variety of repeated loads. High and low temperatures as well as vacuum and corrosive atmospheres indicate the scope of experimental conditions that are important in influencing the mechanical behavior of engineering materials. Yielding, creep and relaxation, ductile or brittle fracture, fatigue fracture, and stress

rupture are types of failure that these research activities can help to avoid in machine and structural members under severe service conditions. Studies of plain and reinforced concrete are aimed towards developing fundamental knowledge of the behavior of concrete under various types of loads and environments. Observations and analyses may be conducted on the phenomenological, macroscopic, or microscopic levels, depending on the particular problem. Some examples of the current activity are studies on beams, slabs, and columns in reinforced concrete and the phenomena of creep, relaxation, durability, and fatigue of plain concrete.

The department's activity in the area of solid mechanics involves teaching and research on such subjects as the stresses, deformations, and stability of machine and structural members subjected to a variety of loading and environmental conditions. Analytical investigations based on such mathematical theories as elasticity, elastic stability, inelasticity or plasticity are used to predict the behavior of such members under load. Studies of the stresses in members of complicated shapes that are subjected to complex loading patterns may be effectively achieved by photoelastic stress analysis. The photoelasticity laboratory of the department is equipped for the analysis of stresses in bodies of irregular or complicated form for which mathematical or theoretical methods are inadequate. Continuous emission gaseous lasers and pulsed ruby lasers are being used as light sources for high speed dynamic and for three dimensional photoelastic studies. Instrumentation is available for other techniques of experimental stress analysis involving optical and electrical as well as mechanical methods.

The dynamic and vibrational behavior of individual members or mechanical systems is also the subject of department research. The vibration laboratory employs various models and instruments for illustrating typical vibration phenomena and for determining wave form and frequency of vibrations in machine parts and structural members.

Fluid mechanics instruction and research is concerned with the contribution of new knowledge of the fundamental behavior of flowing fluids. Theoretical analysis and experimental observation of flow phenomena are integrated to provide thorough understanding of the flow of air, oil, water, and other fluids. Studies of cavitation, open channel flow, pipe and boundary layer flows, and flow about bodies immersed in air or water and in the fundamental understanding necessary for application to technological situations. Current research studies are concerned with such diverse applications as the behavior of turbulent boundary layers in turbomachines and the distribution of blood flow in the brain via model analysis.

REQUIREMENTS FOR GRADUATION

Students in the College of Engineering who meet the University's general requirements with reference to registration, residence, and fees, and who maintain satisfactory scholastic records in this college, are awarded degrees appropriate to their curricula. The semester hours of credit required for graduation in each curriculum administered by the College of Engineering, exclusive of required physical education courses, are as follows:

CURRICULA	SEMESTER HOURS REQUIRED
Aeronautical and Astronautical Engineering	136
Agricultural Engineering	130
Ceramic Engineering	134
Civil Engineering	131
Electrical Engineering	136
Electrical Engineering and Computer Science	136
Engineering Mechanics	130
Engineering Physics	130
General Engineering	136
Industrial Engineering	137
Mechanical Engineering	137
Metallurgical Engineering	136
Engineering Technology	136

Each curriculum leads to the Bachelor of Science degree and may be completed in four years. A graduate of one curriculum ordinarily can qualify for another baccalaureate degree by doing a fifth year of work, consisting of thirty to thirty-six semester hours, providing plans have been made for such an arrangement at the beginning of his third vear.

HONORS FOR GRADUATION

Honors awarded at graduation to superior students are designated on the diploma as Honors, High Honors, or Highest Honors. Students in the Honors Program are graduated with High Honors or Highest Honors as noted in the section of the Honors Program in Engineering (see page 296).

Students who are not participating in the Honors Program receive the designation "Honors" if they have a cumulative University of Illinois average of at least 4.3 and "High Honors" if they have at least a 4.5 average at graduation.

"Highest Honors" may be awarded to any student eligible for "High Honors" meeting one or the other of the following criteria upon recommendation of his department:

1. Notably outstanding performance both in courses and in supplementary activities. Ordinarily the basis for such a citation includes completion of an undergraduate thesis or special project, or
2. A cumulative University of Illinois average of 4.8 or higher.

TRANSFER STUDENTS

The College of Engineering welcomes transfer students from both junior and senior colleges and has worked closely with these schools in Illinois to implement pre-engineering programs.

Students may complete the first two years of study in other accredited institutions and transfer to the University of Illinois with little or no loss of credit provided they follow a program similar to the one at the College of Engineering. Following is a suggested list of courses which should be completed in the first two years prior to transfer. A range of hours is given in each of these course work areas, as the major concern is that students have an adequate coverage of basic subject matter rather than specific numbers of hours in given areas. The range is given for students who may be attending schools on either the quarter-hour or semester-hour system.

SUGGESTED PRE-ENGINEERING COURSES	RANGE OF HOURS QUARTER HOURS	SEMESTER HOURS
Freshman Chemistry	10–15	6–10
General Physics	12–18	8–12
English (Rhetoric and Composition)	9–12	6–8
Mathematics		
Calculus or Calculus and Analytic Geometry	16–20	12–14
Differential Equations	3–4	3
Total Mathematics Credits	(20–24)	(15–17)
Engineering Graphics (Mechanical Drawing and/or Descriptive Geometry)	4–6	3–4
Applied Mechanics—Statics	3–4	2–3
Applied Mechanics—Dynamics	3–6	2–3

OTHER COURSES	RANGE OF HOURS QUARTER HOURS	SEMESTER HOURS
Social Sciences and Humanities	Varies	Varies
Matrix Algebra	3–4	2–3
Introduction to Automatic Digital Computing (Fortran Programming and Numerical Methods)	3–4	2–3
Statistics	4	3

Students should complete as many of the suggested courses as possible and select additional course work from those listed as "Other Courses" to complete full-time study programs. Normally, a student will complete all of the suggested courses and eight to ten additional semester hours of course work. This additional course work may include social sciences and humanities electives but could include work in computer science or advanced mathematics.

Before selecting social sciences and humanities electives, students should familiarize themselves with the elective requirements of the college listed on page 297.

Students may transfer to the college for fall, spring, or summer sessions provided the students have completed sixty or more semester hours of work. Transfer students starting their studies in the fall semester are also allowed to advance enroll during the

preceding summer. Students are informed of this opportunity after they are admitted. Questions are invited concerning this procedure.

A few sophomore-level technical courses such as Electrical Engineering 260, Mechanical Engineering 185, and Civil Engineering 195, are not offered by most junior colleges. However, junior-level transfer students can usually arrange their programs here so that all technical requirements can be completed in a four-semester period on this campus if they wish to do so. If the number of hours remaining to complete a degree requires more than four semesters, the student may enroll for an additional summer session or semester.

The following program represents a typical two-year program completed by students at the University of Illinois and is a suggested program for junior college pre-engineering students who plan to take the courses listed above.

FIRST YEAR

FIRST SEMESTER	HOURS	SECOND SEMESTER	HOURS
Calculus and Analytic Geometry	4 or 5	Calculus and Analytic Geometry	3 to 5
Engineering Graphics	3	General Chemistry, II	4 or 5
General Chemistry, I	4 or 5	Physics	4 or 5
Rhetoric	3	Rhetoric	3
Social Science and Humanities Electives to give a 17- or 18-hour course load		Social Science and Humanities Electives to give a 17- or 18-hour course load	

SECOND YEAR	HOURS		HOURS
Calculus and Analytic Geometry	3 to 5	Differential Equations	3
Physics	4 to 5	Physics (Omit if 10 hours already completed)	4 or 5
Engineering Mechanics (Statics 2 or 3 hours or combined Statics and Dynamics 4 to 6 hours)	2 or 3	Engineering Mechanics (Omit if combined course already completed)	2 or 3
Social Science and Humanities Electives to give a 17- or 18-hour course load		Computer Science	3
		Social Science and Humanities Electives to give a 17- or 18-hour course load	

Students transferring to the College of Engineering are invited to write to the Associate Dean's Office, 101 Engineering Hall, University of Illinois, Urbana, Illinois 61801, or to the head of the department to which they wish to transfer, at any time they wish guidance in the selection of courses. Transfer students who are deficient in areas such as mathematics, physics, or mechanics may find it difficult to obtain a full program here in their first semester. It is frequently possible to overcome this problem by first enrolling in a summer session in those prerequisite courses that will make a full program possible in the fall semester.

Transfer students are not required to take freshman guidance examinations, or any other examinations, to qualify for admission to the College of Engineering, but all other admission regulations apply to them. Transfer students should consult pages 52 through 55 for general information concerning transfer to the University of Illinois, and students from junior colleges should note especially the rules on page 55.

COMBINED ENGINEERING—LIBERAL ARTS AND SCIENCES PROGRAM AT URBANA–CHAMPAIGN

A five-year program of study permits a student to earn a Bachelor of Science degree in some field of engineering from the College of Engineering and a Bachelor of Arts or a Bachelor of Science degree from the College of Liberal Arts and Sciences on the Urbana-Champaign campus.

This program affords students the opportunity to prepare for careers of an interdisciplinary nature. By selecting an appropriate Liberal Arts and Sciences major in a scientific or technical field in combination with the desired engineering curriculum, it is possible for students to qualify for new and unique careers in industry, business, or government. Other students who desire a broader background than it is possible to pro-

vide in the four-year engineering curricula can develop a program to obtain a well-rounded cultural education in addition to a thorough technical training.

Each student in this program has advisers in both colleges, who assist him in planning a program of study to meet the needs of the individual and the requirements for both degrees. Most combinations of engineering curricula and liberal arts majors may be completed in ten semesters, provided the student does not have any deficiencies in the entrance requirements of either college.

The student can complete most successfully the following curricula in engineering: aeronautical and astronautical, agricultural, ceramic, civil, electrical, engineering mechanics, general, industrial, mechanical, and metallurgical engineering, combined with one of the following majors in the sciences and letters curriculum in liberal arts and sciences: anthropology, English, French, history, German, Latin, mathematics, philosophy, political science, psychology, Russian, sociology, Spanish, and speech, although other combinations are permitted.

This combined program operates under the following conditions:

1. Students entering the program must meet admission requirements for both colleges. See pages 42 and 47.

2. A student who starts in the program and decides to transfer out of it is subject to the existing graduation requirements of the college of his choice.

3. The degrees of Bachelor of Science in Engineering and Bachelor of Arts or a Bachelor of Science in Liberal Arts and Sciences are awarded simultaneously. No student in the combined program is permitted to receive a degree from either college before the completion of the entire program.

4. Any student entering this program from high school with his Liberal Arts and Sciences foreign language requirement partially or completely fulfilled is required to substitute for these hours an equivalent number of hours in the humanities or social sciences.

5. Students electing advanced R.O.T.C. or N.R.O.T.C. are required to meet these commitments in addition to the combined program as outlined.

6. Students having seventy-five or more hours of transfer credit are not advised to enter this program since they cannot ordinarily complete it in five years.

7. Students transferring from other colleges and universities must plan to complete at least one year in the College of Liberal Arts and Sciences at Urbana-Champaign and one year in the College of Engineering at Urbana-Champaign in order to satisfy residence requirements if both degrees are to be granted here.

8. Students are expected to maintain at least a 3.5 scholastic average to be accepted or continued in the program.

A typical combined program follows.

FIRST YEAR

Common Freshman Program for Engineers which is taken in the College of Engineering (see pages 299 and 300).

Students are enrolled in the College of Liberal Arts and Sciences for the second and third years.

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	16 HOURS
Biological Science	4	Biological Science	4
Calculus and Analytic Geometry	5	Language	4
Humanities or Social Sciences	4	Liberal Arts and Sciences Major	3
Language	4	Physics (Heat, Electricity, and Magnetism)	4
Physical Education	1	Physical Education	1

THIRD YEAR	18 HOURS		17 TO 19 HOURS
Humanities or Social Sciences	4	Engineering Subjects	6 to 8
Language	4	Humanities or Social Sciences	4
Liberal Arts and Sciences Major	6	Language	4
Physics (Wave Motion, Sound, Light, and Modern Physics)	4	Liberal Arts and Sciences Major	3

Students are enrolled in the College of Engineering for the fourth and fifth years.

FOURTH YEAR	19 HOURS		18 HOURS
Engineering Subjects	15	Engineering Subjects	18
Humanities or Social Sciences	4		

FIFTH YEAR	15 TO 17 HOURS		18 HOURS
Engineering Subjects	15 to 17	Engineering Subjects	18

It may be necessary to adjust the above program in order to allow the student to take more hours in his L.A.S. program.

For further information about this program, the student may write to the Office of the Associate Dean in either the College of Engineering or the College of Liberal Arts and Sciences at Urbana.

AFFILIATIONS WITH OTHER LIBERAL ARTS COLLEGES

The College of Engineering has developed affiliations with several liberal arts colleges whereby students may earn a bachelor's degree from one of the following liberal arts colleges and an engineering degree from the University of Illinois at Urbana-Champaign in a five-year program. In general, these students spend the first three years at the liberal arts college and the final two to two and one-half years at the University of Illinois.

Increasing numbers of engineering graduates enter leadership roles in industry and government and require a greater understanding of the impact of technology on society. The five-year program encourages a student to develop a broad understanding of the social sciences and humanities while he strives for excellence in technical studies. These affiliations have the added benefit of allowing the student to take his pre-engineering studies at a liberal arts school chosen on the basis of geographical location, prestige, religious principles, family circumstances, or other personal reasons.

Colleges which are affiliated with the College of Engineering are:

Augustana College Rock Island, Illinois	Illinois State University Normal, Illinois	Olivet Nazarene College Kankakee, Illinois
Carthage College Kenosha, Wisconsin	Illinois Wesleyan University Bloomington, Illinois	Rockford College Rockford, Illinois
DePaul University Chicago, Illinois	Loras College Dubuque, Iowa	Saint Joseph's College Rensselaer, Indiana
Eastern Illinois University Charleston, Illinois	MacMurray College Jacksonville, Illinois	Shimer College Mt. Carroll, Illinois
Elmhurst College Elmhurst, Illinois	McKendree College Lebanon, Illinois	Wartburg College Waverly, Iowa
Greenville College Greenville, Illinois	Monmouth College Monmouth, Illinois	Western Illinois University Macomb, Illinois
Illinois College Jacksonville, Illinois	Northern Illinois University Dekalb, Illinois	Yankton College Yankton, South Dakota

ADVANCED R.O.T.C. TRAINING COMBINED WITH ENGINEERING

Students in the College of Engineering may elect to participate in the Reserve Officers' Training Program and earn a commission in the United States Army Reserve, United States Air Force Reserve, or the United States Naval Reserve. A commission is awarded

simultaneously with the awarding of the Bachelor of Science degree in an engineering field. Participation in these programs is limited to students who apply and are selected by the Army, Air Force, or Navy units at the University. A monthly stipend is paid to those selected for advanced military training.

These programs require from one to three summer camps or cruises as well as the earning of a specified number of credits in advanced military courses. Credits earned appear in all academic averages computed by the College of Engineering. Certain curricula may use only a limited amount of these credits in fulfillment of graduation requirements. Students should plan on taking nine semesters to obtain both a bachelor's degree in engineering and a commission in the R.O.T.C. program. For further information on these programs, write directly to Professor of Military Science, Professor of Air Force Aerospace Studies, or Professor of Naval Science, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

HONORS PROGRAM IN ENGINEERING

The honors program in engineering is a part of the University James Scholars Program and was established to recognize and develop the talents of superior students. Engineering students in this program are known as James Scholars in Engineering. A student is assigned to an honors adviser in his department, and special consideration is given to the selection of a course program to meet the specific needs of the student. Honors courses and sections are available in most departments for honors students.

Participation in the James Scholars Program is based on special honors work each semester and meeting the following requirements:

1. Freshmen: admission to the University as a James Scholar.

2. Sophomores, juniors, and seniors: maintenance of a 4.3 University of Illinois cumulative grade average or equivalent academic distinction.

3. Transfer students are required to complete, with a grade average of 4.3 or higher, at least one normal semester of work in engineering at the University of Illinois, in addition to having a superior transfer record, for acceptance into the program.

A student is graduated from the James Scholars Program with the designation "High Honors" on his diploma, except that, upon the recommendation of his department, and with the approval of the College Honors Council, the designation "Highest Honors" is awarded to students whose performance in the program has been exceptional and whose grade-point average is not lower than 4.5.

COOPERATIVE ENGINEERING EDUCATION PROGRAM

A five-year program in cooperative engineering education is available to students in all curricula in the college and to students in chemical engineering. Students in the program alternate periods of attendance at the University with periods of employment in industry or government. The employment is an essential element in the educational process and is related to the student's field of study. The diversified work assignments provide the student with a variety of experiences related to his studies. These assignments increase in difficulty and responsibility with each succeeding period off-campus. A list of participating companies may be obtained by writing Cooperative Engineering Coordinator, 101 Engineering Hall, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

Junior college transfer students and other transfer students are eligible to participate in the program.

EXCHANGE SCHOLARSHIP AT MUNICH, GERMANY

The College of Engineering has an Exchange Scholarship with the Technical University in Munich, Germany. Under the terms of the scholarship, a University of Illinois student is given a tuition scholarship at the Technical University and he receives a monthly stipend roughly equivalent to a total of $1,200. A student selected by the Technical University will receive a tuition scholarship at the University of Illinois and an equivalent cash stipend.

Students eligible for study in Germany must be enrolled in one of the following curricula: civil engineering, electrical engineering, industrial engineering, mechanical engineering, metallurgical engineering, or engineering physics.

Requirements for participation in the program are an ability to speak the German language fluently and completion of the sophomore program in engineering at the University of Illinois before leaving for Germany. In addition, the student must be an outstanding scholar who will be an excellent overseas representative of the University of Illinois. He must also be an American citizen.

The program is under the general administration of the Engineering College Honors Council, although the recipient need not be an honors student if he has an outstanding undergraduate record. The program has been approved by both universities on an experimental basis for three years. If the program is successful, it is anticipated that it will be expanded to other German universities and to other countries.

HUMANITIES AND SOCIAL SCIENCES ELECTIVES

All College of Engineering students are required to complete eighteen hours of humanities and social sciences (in addition to rhetoric), including one sequence in humanities and one sequence in social sciences. The two sequences can not be in the same department. A sequence is defined as any combination of at least six hours of approved courses (see list below) taught by a single department, or any of the interdisciplinary sequences listed below. Seminar, honors, and thesis courses can not be used.

APPROVED COURSES IN HUMANITIES

Foreign Languages—all courses except (1) teachers' courses, e.g., 280–282, 382; (2) courses required for entrance.
Architecture 211, 212, 310–317
Art 105–107, 111–112, 115–116, 185–186, 211, 301–309, 313–316, 318–328
Classical Archaeology—all courses
Classical Civilization—all courses
Comparative Literature—all courses
English—all courses except 310, 370, 386–387, 392
Foreign Literature in Translation—Chinese 205–206; Japanese 205–206; Persian 205, 309; Classical Civilization 112, 301–302; French 255–256; German 201; Arabic 307–308; Hindi 309–310; Russian 115–116, 315, 317
History—all courses except 290, 295, 298, 337
Humanities—all courses
Music 100–102, 107, 113, 115, 130–131, 310–317
Philosophy—all courses except 102–105, 291, 321–322, 333–334
Speech 177–178, 207, 307–308, 352
Theatre 101–104, 352, 361–362, 366

APPROVED COURSES IN SOCIAL SCIENCES

Anthropology—all courses except 351, 356
Architecture 379
Communications—all courses except 352, 360
Economics—all courses except 171–173, 272, 366, 371
Engineering Honors 196–197
General Engineering 220, 230, 304
Geography—all courses except 102, 185, 201, 211, 272, 306, 313, 348, 370–373, 378
History and Philosophy of Education 300–302, 385
Journalism 215, 217–218, 220, 231, 241, 251
Labor and Industrial Relations—all courses except 360
Landscape Architecture 214
Latin-American Studies 201
Linguistics—all courses except 375–376, 387–389
Mining Engineering 302
Philosophy 103–105, 321–322
Political Science—all courses except 293
Psychology—all courses except 135, 211, 216–217, 235, 258, 306–307, 311, 330–332, 335, 338, 345–346, 352, 356, 390
Rural Sociology—all courses
Sociology—all courses except 184–185, 190, 332, 352, 385, 387
Urban Planning 171, 351, 374, 378, 380, 382

INTERDISCIPLINARY SEQUENCES IN HUMANITIES

Classical Civilization 301 and Art 301 or 304
Classical Civilization 302 and Art 305 or 307
Classical Civilization and Art 301, 302, 303, 304, or 306
Classical Civilization 362 and Art 305 or 307
Classical Civilization 301 and Philosophy 303
Classical Civilization 301 and Political Science 393
Music 113 and 115, and Art 115
Art 111 and 112, plus any of Architecture 310–317

INTERDISCIPLINARY SEQUENCES IN SOCIAL SCIENCES

Economics 108 and Mining Engineering 302
Sociology 100 and Latin-American Studies 201
Political Science 191 and Latin-American Studies 201

PARTICULARLY RECOMMENDED COURSES

Necessarily an incomplete and somewhat arbitrary list. These courses have been suggested by the departments, or appear particularly appropriate.

1. Humanities
   Architecture 211–212
   Art 111–112
   English 271–272
   Foreign Literature in Translation—all courses
   History 191–192
   Humanities 215–216
   Music 130–131
   Philosophy 170, 306, 327
   Speech 177–178
   Theatre 352

2. Social Sciences
   Anthropology 102, 260
   Communications or Journalism 217
   Economics 108, 255, 300–301, 315
   Geography 104–105, 210, 214, 241, 381–383
   Labor and Industrial Relations 318
   Linguistics 200, 300
   Political Science 110 or 312; 150 or 191, and 345; 305–306
   Psychology 103, 357
   Sociology 100 or 151, 218, 300, 318, 340, 373
   Urban Planning 171, 351, 380

3. All Interdisciplinary Sequences

TECHNICAL AND NONTECHNICAL ELECTIVES

Each engineering curriculum offers some elective opportunities which may be specified as technical or nontechnical. All technical elective courses must be chosen from departmental approved lists.

TECHNICAL ELECTIVES

See departmental notes concerning possible restrictions on technical electives.
Agricultural Engineering 236, 276, 277, 286, 287, 336, 346, 356, 357, 376, 387, 396
Astronomy 301, 306, 307, 314, 321, 357
Chemical Engineering, Chemistry, Computer Science, and Mathematics: All 200- and 300-series courses except Mathematics 202 and 203.
Engineering: All 200- and 300- series courses not required in the student's curriculum except Civil Engineering 230, 290; General Engineering 220, 281, 282, 288, 290, 292, 304; Industrial Engineering 230, 239; Mining Engineering 302
Geology: All courses except Geology 102

NONTECHNICAL ELECTIVES

The student may select any course offered by the University that meets the approval of the student's adviser as being nontechnical and as being appropriate for the student's program of study.

FREE ELECTIVES

These electives are completely free electives to be selected at the prerogative of the student except as noted below.

Credit will not be allowed for a foreign language taken to make up a shortage in entrance requirements, courses of a remedial nature such as mathematics below analytic geometry, or basic military training.

Total transfer credit in required basic courses in mathematics (through integral calculus), physics, rhetoric, freshman chemistry, and engineering graphics may be used for free electives only if the credit covers topics beyond those in equivalent courses at the University of Illinois. Further restrictions on the acceptance of transfer credit for free electives may be imposed by the departments with the approval of the Associate Dean.

PASS-FAIL OPTION

During the spring semester, 1968, the University implemented a system through which students might take a limited number of courses on a pass-fail basis. Specific requirements regarding the option are covered in the *Regulations Applying to All Undergraduate Students,* but the following are guidelines to assist engineering students in selecting courses which may be taken under this option.

Engineering students may take courses on a pass-fail basis from areas which are designated at social science and humanities electives, nontechnical electives (including foreign languages), free electives, and electrical engineering service course electives. Other areas which may be elected on a pass-fail basis are foreign language and mathematics deficiencies, physical education, and military science courses.

At least nine hours of social science and humanities must be taken for grades. The maximum number of technical electives that may be taken on a pass-fail basis in each of the engineering curricula are, as follows:

Aeronautical and Astronautical Engineering	8	
Agricultural Engineering	3	
Ceramic Engineering	3	
Civil Engineering	12	
Electrical Engineering/Computer Science	6 or 7	
Electrical Engineering	12	
Engineering Mechanics	6	
Engineering Physics	8	(excluding advanced mathematics and physics)
General Engineering	3	(from secondary field)
Industrial Engineering	0	
Mechanical Engineering	0	
Metallurgical Engineering	8	

Care should be taken in selecting technical electives on a pass-fail basis since some of the engineering curricula have specified that such courses must be selected from specific technical elective areas. The chief adviser in each department is familiar with such restrictions.

All students may take eighteen hours under the pass-fail option, which is also the maximum alowed by University regulations.

A student will take only one course per semester on the pass-fail basis. The only recognized exception occurs when two courses are offered essentially as one, such as Electrical Engineering 230 (2 hours) and Electrical Engineering 231 (1 hour).

A student must be in good academic standing to elect the pass-fail option, and a student placed on probation after advance enrolling is responsible for changing his program to delete the pass-fail option.

Common Program for Freshmen

Students seeking admission to the College of Engineering who are recent high school graduates or who have earned less than twelve semesters hours of credit at other collegiate

institutions are classified as new freshmen and must meet the entrance requirements to the College of Engineering that are specified for new freshmen. These requirements may be found on page 44 of this catalog.

Although new freshmen take a common, or similar, program they are asked to choose a curriculum in which they wish to study. Freshmen may change their curriculum of study at their own request any time during, or at the conclusion of, their freshman year of study. Since the program of study is essentially the same for all freshman students, such changes can be made without loss of credit toward graduation.

Students who enter deficient in foreign language are required to make up this deficiency before graduation. Normally language deficiencies are made up during the second year of college work or during a summer. Credit earned in removing a deficiency does not count toward graduation and, of course, delays the time required for graduation. If a student is deficient in foreign language, he should plan to take an extra summer session to complete graduation requirements.

A deficiency in foreign language entrance credit is removed by successful completion of the 101 and 102 course series, or equivalent, in any foreign language taught at the University of Illinois. French, German, Russian, and Spanish are the languages that generally are of most benefit to engineers. If desired, the deficiency may be made up at another institution.

The Mathematics Placement Test is required of all freshman students entering the College of Engineering, and they are urged to take the examination during the summer prior to enrollment.

The Chemistry Placement-Proficiency Test is required of all entering freshmen who will take freshman chemistry during their first year. This examination will be used to place a student in a remedial course for engineers, Chemistry 100, or in the normal beginning course for engineers, Chemistry 101. For students with a superior background in chemistry, the test will be used to place them in Chemistry 102 and grant them four hours proficiency credit for Chemistry 101.

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	18 HOURS
Chem. 101—General Chemistry	4	Chem. 102—General Chemistry	4
Eng. 100—Engineering Lectures	0	G.E. 104—Engineering Graphics, II,[1] or Humanities or Social Sciences Elective	3
G.E. 103—Engineering Graphics, I[1]	3	Math. 131—Calculus and Analytic Geometry	3
Math. 120—Calculus and Analytic Geometry[2]	5	Physics 106—General Physics (Mechanics)	4
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1

NOTES

[1] All students except those enrolled in the electrical engineering and the electrical engineering and computer science curricula are required to take General Engineering 103. Students in general engineering take the second semester engineering graphics course, General Engineering 104. All others replace General Engineering 104 with a humanities or social sciences elective. Students required to take this elective may have it scheduled during their first semester.

[2] Mathematics 111 or 112, and 114, for those entering freshmen who do not pass the Mathematics Placement Test. Students who have had analytic geometry in high school and pass the Mathematics Placement Test will replace the Mathematics sequence 120, 131, 141 with Mathematics 135, Mathematics 145, and three semester hours of free electives.

Curriculum in Aeronautical and Astronautical Engineering

For the Degree of Bachelor of Science in Aeronautical and Astronautical Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 OR 19 HOURS
Math. 141—Calculus and Analytic Geometry	5
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
T.A.M. 156—Analytical Mechanics	5
Humanities or Social Science Elective[1]	3 or 4
Physical Education	1

SECOND SEMESTER	17 OR 18 HOURS
C.S. 101—Introduction to Automatic Digital Computing	3
Math. 345—Differential Equations and Orthogonal Functions	3
M.E. 207—Thermodynamics	3
Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Humanities or Social Science Elective[1]	3 or 4
Physical Education	1

THIRD YEAR	17 HOURS
A.A.E. 212—Aerodynamics, I	4
A.A.E. 224—Flight Structures, I	4
A.A.E. 254—Aerospace Systems, I	3
Math. 343—Advanced Calculus	3
Elective[2]	3

	18 OR 19 HOURS
A.A.E. 213—Aerodynamics, II	4
A.A.E. 225—Flight Structures, II	4
A.A.E. 233—Aircraft Propulsion	3
AA.E. 255—Aerospace Systems, II	4
Humanities or Social Science Elective[1]	3 or 4

FOURTH YEAR	17 OR 18 HOURS
A.A.E. 260—Aerospace Laboratory	2
A.A.E. 292—Seminar	1
Humanities or Social Science Elective[1]	3 or 4
Elective[2]	11

	16 HOURS
A.A.E. 241—Aerospace Design	3
A.A.E. 263—Aerospace Laboratory	2
Elective[2]	11

NOTES

[1] One hundred thirty-six hours, excluding physical education, are required for graduation, of which eighteen must be in social sciences and humanities. These requirements are discussed on page 297.
[2] Twenty-five hours of elective credits are required for graduation. These electives must contain at least six hours from list A below and three hours from list B. In addition, credit is required in at least one 300 level Aeronautical and Astronautical Engineering course. Six hours of electives are free electives. The remaining shall be technical electives.
A: Electrical Engineering 220, 229, 230, 231, 232, 233, 234, 235, 251, 260; Physics 341, 342.
B: Metallurgical Engineering 334; Physics 383.

Curriculum in Agricultural Engineering

For the Degree of Bachelor of Science in Agricultural Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS
Agr. Eng. 126—Engineering in Agriculture, I	3
Math. 141—Calculus and Analytic Geometry	5
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
T.A.M. 150—Analytical Mechanics (Statics)	2
Biological and Agricultural Science Elective	3
Physical Education	1

SECOND SEMESTER	17 HOURS
Agr. Eng. 127—Engineering in Agriculture, II	3
C.C. 101—Introduction to Automatic Digital Computing	3
Physics 108—General Physics (Wave Motion, Sound, Sight, and Modern Physics)	4
T.A.M. 211—Analytical Mechanics (Dynamics)	3
Biological and Agricultural Science Elective	3
Physical Education	1

THIRD YEAR	17 HOURS		17 OR 18 HOURS
Agricultural Engineering Technical Elective	3	Agricultural Engineering Technical Elective	3
E.E. 220—Basic Electrical Engineering	3	Agr. Eng. 298—Undergraduate Seminar	1
Math. 345—Differential Equations and Orthogonal Functions	3	C.E. 261—Structural Theory, I, or M.E. 220—Mechanics of Machinery	3 or 4
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	Econ. 108—Elements of Economics	3
T.A.M. 223—Mechanical Behavior of Solids	1	M.E. 209—Thermodynamics and Heat Transfer	3
Humanities and Social Science Elective	4	T.A.M. 235—Fluid Mechanics	4

FOURTH YEAR	15 OR 16 HOURS		15 HOURS
Agricultural Engineering Technical Elective	3	Agricultural Engineering Technical Elective	3
Biologcal and Agricultural Science Elective	3	Agr. Eng. 299—Undergraduate Thesis	2
Humanities and Social Science Elective	4	Biological and Agricultural Science Elective	3
Technical Elective	2 or 3	Humanities and Social Science Elective	4
Free Elective	3	Free Elective	3

BIOLOGICAL AND AGRICULTURAL SCIENCES ELECTIVES

Students must complete a minimum of twelve hours from the following biological and agricultural sciences:

	HOURS
Agr. Econ. 220—Farm Management	3
Agron. 101—Introductory Soils	4
Agron. 121—Principles of Field Crop Science	4
An. Sci. 201—Livestock Management	5
Biol. 100—Biological Science	4
Biol. 101—Biological Science	4
Bot. 100—General Botany	4
Geol. 105—Agricultural Geology, or Geol. 250—Geology for Engineers	4 or 3
Zool. 104—Elementary Zoology	4

HUMANITIES AND SOCIAL SCIENCES ELECTIVES

Students must complete Economics 108 and fifteen aditional hours of humanities and social sciences from the approval college list on page 297.

TECHNICAL ELECTIVES

Each student must have a minimum of eighteen hours. He selects the following:

1. C.E. 261—Structural Theory, I, or M.E. 220—Mechanics of Machinery
2. Two courses from Agricultural Engineering Technical Electives, Group I
3. Two courses from Agricultural Engineering Technical Electives, Group II
4. Additional hours from Other Technical Courses

AGRICULTURAL ENGINEERING TECHNICAL ELECTIVES

Group I	HOURS
Agr. Eng. 236—Machine Characteristics and Mechanisms	3
Agr. Eng. 287—Environmental Control for Plants and Animals	3
Agr. Eng. 311—Instrumentation amd Measurements	3 or 4
Agr. Eng. 340—Introduction to Applied Statistics	3

Group II

Agr. Eng. 277—Design of Concrete and Steel Structures for Agriculture	3
Agr. Eng. 336—Design of Agricultural Machinery	3
Agr. Eng. 346—Tractors and Prime Movers	3
Agr. Eng. 356—Soil Conservation Structures	3
Agr. Eng. 357—Land Drainage	3
Agr. Eng. 387—Agricultural Process Engineering	3

OTHER TECHNICAL COURSES

All courses which satisfy the college requirements for technical electives.

Students desiring to specialize in a specific area of agricultural engineering may use the following lists as a guide in choosing their technical electives:

ELECTRIC POWER AND PROCESSING	HOURS
Agr. Eng. 236	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 336	3
Agr. Eng. 340	3
Agr. Eng. 387	3
E.E. 232	3
E.E. 233	3

FARM STRUCTURES	HOURS
Agr. Eng. 277	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 340	3
C.E. 214	3
C.E. 262	3

POWER AND MACHINERY	HOURS
Agr. Eng. 236	3
Agr. Eng. 311	3
Agr. Eng. 336	3
Agr. Eng. 340	3
Agr. Eng. 346	3
M.E. 224	3
M.E. 234	3

SOIL AND WATER	HOURS
Agr. Eng. 277	3
Agr. Eng. 287	3
Agr. Eng. 311	3
Agr. Eng. 340	3
Agr. Eng. 356	3
Agr. Eng. 357	3

Curriculum in Ceramic Engineering

For the Degree of Bachelor of Science in Ceramic Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	18 HOURS
Cer. E. 101—Ceramic Crystal Chemistry	3	Cer. E. 102—Ceramic Materials and Processes	3
Math. 141—Calculus and Analytic Geometry	5	Math. 345—Differential Equations and Orthogonal Functions	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Humanities or Social Science Electives[1]	3	T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4
Physical Education	1	Humanities or Social Science Electives[1]	3
		Physical Education	1

THIRD YEAR	18 HOURS		18 HOURS
Cer. E. 205—Phase Equilibria in Ceramic Systems	3	Cer. E. 208—Thermal Processing	3
Cer. E. 214—Chemistry and Technology of Glass	3	Cer. E. 216—Rate Processes in Ceramic Engineering	3
Cer. E. 221—Pyrometry	2	Cer. E. 222—Ceramic Coatings	3
Chem. 245—Physical Chemistry for Engineers	3	Cer. E. 331—Ceramic Microscopy	3
C.S. 101—Introduction to Automatic Digital Computing	3	Chem. 342—Physical Chemistry	3
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	Humanities or Social Science Electives[1]	3
T.A.M. 223—Mechanical Behavior of Solids	1		

FOURTH YEAR	18 HOURS		17 HOURS
Cer. E. 271—Design of High-Temperature Systems	3	Cer. E. 272—Ceramic Engineering Design	2
Cer. E. 307—Thermal and Mechanical Properties of Ceramic Materials	3	Cer. E. 310—Refractory Technology	3
Cer. E. 309—Whiteware Materials	3	Electrical Applications Electives	3
E.E. 220—Basic Electrical Engineering	3	Humanities or Social Science Electives[1]	3
Humanities or Social Science Electives[1]	3	Free Electives	6
Technical Electives	3		

NOTES

[1] Consult the college list of approved courses on page 297.

Curriculum in Chemical Engineering

For the Degree of Bachelor of Science in Chemical Engineering

This curriculum is administered by the College of Liberal Arts and Sciences (see page 367).

Curriculum in Civil Engineering

For the Degree of Bachelor of Science in Civil Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
C.E. 195—Introduction to Civil Engineering	1	C.E. 292—Design and Planning of Civil Engineering Systems	3
C.S. 101—Introduction to Automatic Digital Computing	3	C.E. 293—Stochastic Concepts in Civil Engineering	3
Math. 141—Calculus	5	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	T.A.M. 212—Analytical Mechanics (Dynamics)	3
T.A.M. 152—Analytical Mechanics (Statics)	3	T.A.M. 221—Elementary Mechanics of Deformable Bodies	3
Physical Education	1	Physical Education	1

THIRD YEAR	17 HOURS		17 HOURS
T.A.M. 235—Fluid Mechanics	4	Unspecified Courses (see below)	17
Unspecified Courses (see below)	13		

FOURTH YEAR	16 HOURS		17 HOURS
C.E. 295—Professional Practice	0	Unspecified Courses (see below)	17
Unspecified Courses (see below)	16		

The unspecified courses listed in the third and fourth years should be selected, in sequences appropriate to the student's interest, on the basis of the following requirements:

ADVANCED MATHEMATICS

Each student must elect at least one course (three hours) of advanced mathematics at the 300-level.

INTRODUCTORY TECHNICAL COURSES **HOURS**

Each student must take at least six of the following nine introductory courses in the several technical specialty areas in civil engineering:

C.E. 201—Photogrammetric and Geodetic Engineering	4
C.E. 216—Construction Engineering	3
C.E. 220 or 230—Transportation Engineering	3
C.E. 241—Environmental Engineering	3
C.E. 255—Hydrosystems Engineering	3
C.E. 261—Structural Engineering	3
C.E. 280—Soil Mechanics and Foundation Engineering	3
Geol. 250—Geology	3
T.A.M. 224—Materials	3

SOCIAL SCIENCES AND HUMANITIES

Each student is required to select eighteen semester hours from the college approved list of Social Sciences and Humanities. Included in this list is Economics 108, which is required of all civil engineering students.

FREE ELECTIVES

Six semester hours of free elective must be selected in accordance with the regulations of the college and the department.

TECHNICAL ELECTIVES

Twenty or twenty-one hours of technical courses must be selected by the student, in consultation with his adviser and with the approval of the department, to define a coherent program for which the degree of Bachelor of Science in Civil Engineering may be appropriately awarded.

Curriculum in Electrical Engineering

For the Degree of Bachelor of Science in Electrical Engineering

To qualify for registration in the electrical engineering courses specified in the first semester of the junior year of the curriculum in electrical engineering, a student must have a combined grade-point average of 3.25 in the mathematics, physics, computer science, and electrical engineering courses which are required in the freshman and sophomore years of the curriculum.

The following suggested curriculum indicates just one way in which the student may satisfy in eight semesters the requirements for a Bachelor of Science degree in Electrical Engineering. Considerable flexibility is available, however. For example, with the approval of his adviser, the student may delay any one of the technical courses in the sixth semester and replace it with an elective.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	18 HOURS
C.S. 101—Introduction to Automatic Digital Computing	3	E.E. 260—Networks, I	3
Math. 141—Calculus and Analytic Geometry	5	E.E. 251—Electrical Engineering Laboratory, I	1
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Math. 345—Differential Equations and Orthogonal Functions	3
T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physical Education	1	Physical Education	1
		Electives[1]	6

THIRD YEAR

	17 HOURS		18 HOURS
E.E. 229—Introduction to Electromagnetic Fields	3	E.E. 310—Systems, I	3
E.E. 262—Networks, II	3	E.E. 323—Circuits Laboratory	1
E.E. 340—Electronics	3	E.E. 330—Magnetic Circuits and Transformers	3
EE. 341—Electronics Experimentation	1	E.E. 331—Magnetic Circuits and Transformer Laboratory	1
M.E. 202—Thermodynamics	3	E.E. 342—Advanced Electronics	3
Electives[1]	4	E.E. 343—Electronics Laboratory	1
		E.E. 350—Lines, Fields, and Waves	3
		Physics 383—Atomic Physics and Quantum Theory for Engineers	3

FOURTH YEAR

	18 HOURS		18 HOURS
E.E. 352—Electromagnetic Fields	3	Electives[1]	18
E.E. 384—Properties of Solids	3		
Electives[1]	12		

NOTES

[1] Forty-six hours of electives are required. Eighteen hours must be in the humanities and social sciences from the college list of approved sequences on page 297. Nineteen hours must be technical electives. Thirteen of the technical elective hours must be in electrical engineering courses not otherwise required. Nine hours can be free electives. Suggested technical electives other than electrical engineering courses are Mathematics 315, 317, 343, 346, 361, 363. The thirteen hours of electrical engineering technical electives may be chosen from the following: Courses normally available to first-semester juniors: 266, 271, 272, 288, 294, 296, 297, 299, 357. Courses normally available to second-semester juniors: 344, 349, 366, 388, 391. Courses normally available to first-semester seniors: 246, 321, 324, 332, 333, 336, 347, 353, 355, 356, 359, 367, 373, 376, 378, 381, 382, 383, 385, 386, 387, 389, 392, 393, 394, 397. Note that credit can not be obtained for both 347 and 381. Computer Science 293 may not be used to fulfill any elective requirements.

Curriculum in Electrical Engineering and Computer Science

For the Degree of Bachelor of Science in Electrical Engineering and Computer Science

To qualify for registration in the electrical engineering courses specified in the first semester of the junior year of the curriculum in electrical engineering and computer science, a student must have a combined grade-point average of 3.25 in the mathematics, physics, computer science, and electrical engineering courses which are required in the freshman and sophomore years of the curriculum.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	19 HOURS
C.S. 101—Introduction to Automatic Digital Computing	3	E.E. 251—Electrical Engineering Laboratory, I	1
Math. 141—Calculus and Analytic Geometry	5	E.E. 260—Networks, I	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Math. 345—Differential Equations and Orthogonal Functions	3
Elective	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physical Education	1	T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4
		Elective	3
		Physical Education	1

THIRD YEAR	17 HOURS		17 HOURS
C.S./E.E. 294—Introduction to the Theory of Digital Machines[1]	3	C.S. 201—Machine Language and Systems Programming	3
E.E. 262—Networks, II	3	E.E. 229—Introduction to Electromagnetic Fields	3
E.E. 340—Electronics	3	E.E. 342—Advanced Electronics	3
E.E. 341—Electronics Experimentation	1	E.E. 343—Electronics Laboratory	1
M.E. 202—Thermodynamics	3	Physics 383—Atomic Physics and Quantum Mechanics for Engineers, or E.E. 310—Systems, I	3
Elective	4	Elective	4

FOURTH YEAR	18 OR 19 HOURS		17 OR 18 HOURS
C.S./E.E./Math. 392—Introduction to Automata Theory, or C.S. 306—Machine Language and System Programming, II, or C.S./E.E. 394—Logical Design of Automatic Digital Computer Circuits, or C.S./Math. 287—Introduction to Numerical Analysis	3	E.E. 323—Circuits Laboratory	1
E.E. 310—Systems, I, or Physics 383—Atomic Physics and Quantum Mechanics for Engineers	3	E.E. 330—Magnetic Circuits and Transformers	3
E.E. 350—Lines, Fields, and Waves	3	E.E. 331—Magnetic Circuits and Transformers Laboratory	1
E.E. 381—Pulse Techniques,[2] or C.S./E.E. 393—Digital Computer Circuit Design	4 or 3	E.E. 352—Electromagnetic Fields	3
et. E./E.E. 384—Properties of Solids, or Elective	3	Elective, or Met. E./E.E. 384—Properties of Solids	3
lective	3	Elective[2]	6 or 7

NOTES

[1] May be replaced by C.S./E.E./Math. 391—Boolean Algebra and Switching Theory and should be replaced by C.S./E.E./Math. 391 if student plans to take C.S./E.E./Math. 392.
[2] Students electing E.E. 381 take six hours of elective in the last semester.

Thirty-three or thirty-four (see note two above) hours of electives are required. Eighteen hours must be in the humanities and social sciences from the college list of approved sequences. Nine hours can be free electives. The remainder must be technical electives.

Suggested additional courses are: C.S. 301, C.S. 306, C.S./E.E./Math. 391, C.S./E.E./Math. 392, C.S./E.E. 394, E.E. 381, E.E. 382, or E.E. 383, C.S./E.E. 385, C.S./E.E. 393, E.E. 388, E.E. 385, C.S./Math. 387, Math. 315, and Math. 361. Those not used to fulfill the requirement above may be treated as technical electives.

Curriculum in Engineering Mechanics

For the Degree of Bachelor of Science in Engineering Mechanics

This curriculum is designed primarily for students interested in research and development in engineering. It emphasizes applied mechanics and includes courses in all the basic sciences (mathematics, physics, chemistry) and the engineering sciences (mechanics of solids, fluid flow, thermodynamics, electrical theory, properties of engineering materials). The curriculum also provides sound preparation for graduate study.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 HOURS
Math. 141—Calculus and Analytic Geometry	5	C.S. 101—Introduction to Automatic Digital Computing	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Math. 343—Advanced Calculus	3
T.A.M. 152—Engineering Mechanics, I (Statics)	3	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Humanities or Social Science Electives[1]	3	T.A.M. 212—Engineering Mechanics, II (Dynamics)	3
Physical Education	1	Humanities or Social Science Electives[1]	3
		Physical Education	1

THIRD YEAR	16 HOURS		18 HOURS
E.E. 260—Networks, I	3	E.E. 262—Networks, II	3
Math. 345 or 341—Differential Equations	3	M.E. 202—Thermodynamics and Heat Transfer	3
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	T.A.M. 224—Behavior of Materials	3
T.A.M. 235—Fluid Mechanics	4	Advanced Dynamics Elective[2]	3
Humanities or Social Science Electives[1]	3	Humanities or Social Science Electives[1]	3
		Technical Elective	3

FOURTH YEAR	17 HOURS		16 HOURS
T.A.M. 293—Senior Research Project	2	Advanced Fluid Mechanics Elective[4]	3
T.A.M. 351—Fundamental Concepts of Deformable Body Mechanics	3	T.A.M. 294—Senior Research Project	4
T.A.M. 392—Analysis and Synthesis of Problems	3	Continuum Mechanics Elective[5]	3
Modern Physics Elective[3]	3	Technical Elective	3
Humanities or Social Science Electives[1]	3	Free Elective	3
Free Elective	3		

NOTES

[1] Consult the college list of approved courses on page 297.
[2] T.A.M. 314, T.A.M. 311, Physics 322, or other selection with consent of adviser.
[3] Physics 381, Physics 383, Physics 385, or other selection with consent of adviser.
[4] T.A.M. 334, T.A.M. 335, or other selection with consent of adviser.
[5] T.A.M. 360, A.A.E. 326, M.E. 305, or other selection with consent of adviser.

Curriculum in Engineering Physics

For the Degree of Bachelor of Science in Engineering Physics

This curriculum prepares students for graduate study in physics or related fields, and for research and development positions in industrial and government laboratories which require men with a broad, basic education in physics and mathematics.

The curiculum requires 130 hours, plus required physical education; of these 130 hours, thirty-seven hours are elective.

Students in the engineering physics curriculum, when registering for advanced undergraduate courses in physics, must have a grade-point average of at least 3.5 in all subjects exclusive of the basic courses in military training and physical education, and a combined grade-point average of at least 3.5 in all courses in mathematics and physics taken prior to such registration. Transfer students must have a corresponding record in the institution from which they transfer and must maintain such status at the University.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	16 HOURS
Math. 141—Calculus and Analytic Geometry	5	Math. 343—Advanced Calculus	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Language[1] or Humanities or Social Science Elective[2]	4	Physics 341—Electricity and Magnetism	4
Humanities or Social Science Elective[2]	4	Language[1] or Humanities or Social Science Elective[2]	4
Physical Education	1	Physical Education	1

THIRD YEAR	17 HOURS		19 HOURS
C.S. 101—Introduction to Automatic Digital Computing	3	Physics 322—Theoretical Mechanics	4
Math. 345—Differential Equations and Orthogonal Functions[3]	3	Physics 343—Electronic Circuits[5]	5
Physics 321—Theoretical Mechanics	4	Physics 371—Light	4
Physics 342—Electricity and Magnetism	4	Humanities or Social Science Elective[2]	3
Nontechnical Elective[4]	3	Nontechnical Elective[4]	3

FOURTH YEAR	15 HOURS		15 HOURS
Physics 303—Modern Experimental Physics, or Physics 344—Electronic Circuits	5	Physics 360—Thermodynamics	4
Physics 386—Atomic Physics and Quantum Mechanics, I	4	Physics 387—Atomic Physics and Quantum Mechanics, II	4
Technical or Nontechnical Elective[4]	3	Technical or Nontechnical Elective[4]	4
Free Elective	3	Free Elective	3

NOTES

[1] German, Russian, or French is recommended. If one of these was begun in high school, it should be continued through the equivalent of the fourth semester of the University course.
[2] Consult the college list of approved courses on page 297.

[3] Mathematics 341 and 342 may replace Mathematics 345. Extra hours caunt as technical electives.
[4] Advanced military caurses may be substituted for six hours of nantechnical electives.
[5] Students wishing to emphasize electrical engineering may take Electrical Engineering 340 and 341.

ELECTIVE COURSES

Of the thirty-seven hours of elective courses, eighteen hours must be chosen from the humanities and social science group (see page 297). At least six additional hours must be nontechnical electives, which may include up to six hours of advanced military science or any first-year foreign language not needed to make up a deficiency in entrance requirements.

The remaining thirteen hours of electives, including six hours of free electives, may be in technical or nontechnical courses. Technical electives are chosen from a wide variety of courses, usually in mathematics, science, or engineering. Below are listed some recommended sequences in engineering courses for the student who wishes to emphasize a particular branch of engineering. Such a student should consult his physics adviser and an adviser in the engineering department concerned since some rearrangement of his schedule may be necessary.

Of the thirty-seven elective hours, at least twelve must be chosen either from technical courses numbered 300 or above or from nontechnical courses numbered 200 or above.

AERONAUTICAL AND ASTRONAUTICAL ENGINEERING

	HOURS
A.A.E. 212—Aerodynamics, I	4
A.A.E. 213—Aerodynamics, II	4
A.A.E. 224—Flight Structures, I	4
A.A.E. 254—Aerospace Dynamic Systems, I	3
A.A.E. 255—Aerospace Dynamic Systems, II	4

CERAMIC ENGINEERING

Cer. E. 205—Phase Equilibria in Ceramics Systems	3
Cer. E. 310—Refractory Technology	3
Cer. E. 340—Electrical Ceramics	3

ELECTRICAL ENGINEERING

E.E. 294—Introduction to the Theory of Digital Machines	3
E.E. 349—Nonlinear Electronic Circuits	3
E.E. 381—Pulse Techniques	4
E.E. 382—Transistor Circuits	4
E.E. 393—Digital Computer Circuit Design	3
E.E. 394—Logical Design of Automatic Digital Computer Circuits	3

ENGINEERING MECHANICS

T.A.M. 221—Elementary Mechanics of Deformable Bodies	3
T.A.M. 235—Fluid Mechanics	4

Additional recommended courses: T.A.M. 224, 326, 335, and either T.A.M. 321 or 351.

MECHANICAL ENGINEERING

M.E. 211—Introduction to Gas Dynamics, and M.E. 213—Heat Transfer, or M.E. 254—Heat Transfer and Gas Dynamics	6 or 3
M.E. 302—Nuclear Power Engineering	3
M.E. 305—Thermodynamics of High Velocity Flow	3
M.E. 309—Experimental Gas Dynamics	4

METALLURGICAL ENGINEERING

Met. E. 201—Physical Metallurgy, I	3
Met. E. 203—Physical Metallurgy Laboratory, I	1
Met. E. 384—Properties of Solids	3

NUCLEAR ENGINEERING

Nuc. Eng. 347—Introduction to Nuclear Engineering	4
Nuc. Eng. 398—Radiochemistry Laboratory	2
Physics 344—Electronic Circuits, or Physics 303—Modern Experimental Physics	5
Either Physics 344 or 303 is required; it is recommended that both be taken.	
Physics 382—Nuclear Physics	3

Curriculum in General Engineering

For the Degree of Bachelor of Science in General Engineering

This curriculum is intended for students who wish to pursue a broad fundamental engineering curriculum together with work in an approved secondary field. The secondary field of concentration may be selected from such areas as shown below or from any other cohesive field of study approved by the department. In the past, students have selected other secondary fields including law, mathematics, biology, oceanography, meteorology, technical writing, engineering design, wood science, etc.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	17 HOURS
C.S. 101—Introduction to Automatic Digital Computing	3	G.E. 221—Introduction to General Engineering Design	3
Econ. 108—Elements of Economics	3	Math. 345—Differential Equations and Orthogonal Functions	3
Math. 141—Calculus and Analytic Geometry	5	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	T.A.M. 211—Analytical Mechanics (Dynamics)	3
T.A.M. 150—Analytical Mechanics (Statics)	2	Humanities or Social Science Electives[1]	3
Physical Education	1	Physical Education	1

THIRD YEAR	18 HOURS		19 HOURS
E.E. 220—Basic Electrical Engineering	3	E.E. 232—Electronics and Electronic Application	2
G.E. 231—Engineering Analysis, I	3	E.E. 233—Electronics Laboratory	1
M.E. 205—Thermodynamics	3	G.E. 232—Engineering Analysis, II	4
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	G.E. 288—Economic Analysis for Engineering Decision Making	3
Elective[2]	3	M.E. 206—Thermodynamics	3
Humanities or Social Science Elective[1]	3	Humanities or Social Science Elective[1]	3
		Elective[2]	3

FOURTH YEAR	17 HOURS		17 HOURS
G.E. 241—Component Design	4	G.E. 220—History of Engineering	3
M.E. 254—Heat Transfer and Gas Dynamics	3	G.E. 242—Project Design	3
T.A.M. 235—Fluid Mechanics	4	G.E. 291—General Engineering Seminar	0
Elective[2]	3	G.E. 292—Engineering Law	3
Free Elective	3	Humanities or Social Science Elective[1]	3
		Elective[2]	2
		Free Elective	3

NOTES

[1] Consult the college list of approved courses on page 297.
[2] These electives must be selected from the secondary field.

SUGGESTED FIELDS OF CONCENTRATION

ENGINEERING ADMINISTRATION

	HOURS
Accy. 201—Fundamentals of Accounting	3
Accy. 206—Cost Accounting for Engineers	3
Bus. Adm. 210—Management and Organization	3
Bus. Adm. 247—Introduction to Management	3
Bus. Adm. 248—Personnel Management	3
Bus. Adm. 249—Human Relations	3
Bus. Adm. 314—Production	3
Bus. Adm. 315—Management in Manufacturing	3
Bus. Adm. 321—Industrial Social Systems, I	3
Bus. Adm. 323—Industrial Social Systems, II	3
Fin. 257—Corporation Finance	3
G.E. 282—Introduction to Patent Law	1
G.E. 330—Industrial Standardization	2
I.E. 233—Industrial Quality Control	3
Math. 263—Statistics in Engineering and the Physical Sciences	3
Rhet. 251—Business Writing	3

ENGINEERING MARKETING

Accy. 201—Fundamentals of Accounting	3
Bus. Adm. 202—Principles of Marketing	3
Bus. Adm. 272—Industrial Selling	3
Bus. Adm. 337—Advertising and Sales Management	3
Bus. Adm. 344—Consumer Market Behavior	3
Bus. Adm. 360—Marketing Logistics	3
G.E. 282—Introduction to Patent Law	1
G.E. 330—Industrial Standardization	2
Math. 263—Statistics in Engineering and the Physical Sciences	3
Psych. 245—Industrial Psychology	3
Rhet. 251—Business Writing	3

ENVIRONMENTAL QUALITY

Anth. 369—Introduction to Human Ecology	3 or 5
Anth. 374—Problems in Human Ecology	4
Biol. 312—Environmental Biology	5
C.E. 241—Water Quality and Water Pollution	3
C.E. 240—Control of the Urban Environment	3
C.E. 345—Environmental Health Engineering	3
C.E. 346—Biology of Polluted Water	3
G.E. 348—Air Pollution Seminar	2

COMPUTER SCIENCE

Any computer science course beyond Computer Science 101.

MINING AND GEOLOGICAL ENGINEERING

C.E. 200—General Surveying, or C.E. 201—Surveying, I[1]	3
C.E. 280—Foundation Engineering[1]	3
C.E. 383—Soil Mechanics	3
C.E. 384—Applied Soil Mechanics	3
C.E. 385—Engineering Aspects of Superficial Soils	4
G.E. 293—Special Problems[1]	3
Geol. 101—Physical Geology[1]	4
Geol. 102—Historical Geology	4
Geol. 250—Geology for Engineers	3
Geol. 311—Structural Geology[1]	4
Geol. 331—Mineralogy	4
Geol. 332—Mineralogy–Petrology	4
Math. 263—Statistics in Engineering and the Physical Sciences	3
Math. 343—Advanced Calculus	3
Min. E. 356—Rock Mechanics[1]	3

Any mining engineering course.

NOTES

[1] These courses are required in the mining engineering option. Eleven of these hours will count as the secondary field and the remainder will be substituted for other courses with the approval of the adviser.

Curriculum in Industrial Engineering

For the Degree of Bachelor of Science in Industrial Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	17 HOURS
Math. 141—Calculus and Analytic Geometry	5	C.S. 101—Introduction to Automatic Digital Computing	3
M.E. 185—Moterials Processing and Production Technology	4	Math. 345—Differential Equations and Orthogonal Functions	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4	T.A.M. 221—Elementary Mechanics of Deformable Bodies	3
P.E.M.	1	Humanities or Social Science Elective[1]	3
		P.E.M.	1

THIRD YEAR	19 HOURS		18 HOURS
I.E. 232—Methods-Time Analysis	3	Accy. 206—Cost Accounting for Engineers	3
E.E. 220—Basic Electrical Engineering	3	I.E. 286—Operations Analysis	3
M.E. 209—Thermodynamics and Heat Transfer	3	I.E. 333—Engineering Applications of Statistics	3
M.E. 220—Mechanics of Machinery	4	M.E. 224—Design of Machine Elements	3
Math. 263—Statistics in Engineering and the Physical Sciences	3	M.E. 234—Heat Treatment of Metals	3
Humanities or Social Science Elective[1]	3	Humanities or Social Science Elective[1]	3

FOURTH YEAR	18 HOURS		17 HOURS
I.E. 282—Process Planning and Economy in Manufacturing	3	I.E. 290—Senior Project Laboratory	2
I.E. 288—Industrial Systems Analysis and Design	3	I.E. Systems Elective[3]	3
I.E. 291—Seminar	0	Technical Elective	3
I.E. 357—Safety Engineering	3	Humanities or Social Science Elective[1]	3
I.E. 386—Industrial Engineering Analysis	3	Free Electives	6
Technical Elective[2]	3		
Humanities or Social Science Elective[1]	3		

NOTES

[1] Consult the college list of approved courses on page 297.

[2] These three hours must be selected from the departmental list of approved courses for industrial engineering.

[3] Must be taken from Industrial Engineering 306, 332, 334, 350, 355.

Note: A total of eighteen hours of social science and humanities and nine hours of technical electives is required. Three hours of social science must be Economics 108, and this course is recommended for the second semester of the freshman year.

Curriculum in Mechanical Engineering

For the Degree of Bachelor of Science in Mechanical Engineering

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	18 HOURS
Math. 141—Calculus and Analytic Geometry	5	C.S. 101—Introduction to Automatic Digital Computing	3
M.E. 185—Materials Processing and Production Technology	4	Math. 345—Differential Equations and Orthogonal Functions	3
Physics 107—General Physics (Heat, Electricity and Magnetism)	4	M.E. 220—Mechanics of Machinery	4
T.A.M. 154—Analytical Mechanics	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physical Education	1	Social Science and Humanities Elective	3
		Physical Education	1

THIRD YEAR	18 HOURS		18 HOURS
E.E. 220—Basic Electrical Engineering	3	Electrical Engineering Electives[1]	3
M.E. 205—Thermodynamics	3	M.E. 206—Thermodynamics	3
M.E. 210—Introduction to Engineering Experimentation	3	M.E. 213—Heat Transfer	3
M.E. 211—Introductory Gas Dynamics	3	M.E. 224—Design of Machine Elements	3
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	M.E. 234—Heat Treatment of Metals	3
Social Science and Humanities Elective	3	Technical Elective[2] or Social Science and Humanities Elective	3

FOURTH YEAR	18 HOURS		17 HOURS
Mechanical Engineering Systems[3]	3	Free Electives	6
M.E. 250—Thermo Science Laboratory	3	Social Science and Humanities Elective	6 or 3
M.E. 265—Instrumentation and Controls	3	Technical Elective[2]	3 or 6
M.E. 271—Design of Machine Elements	3	M.E. 290—Senior Project Laboratory	2
M.E. 291—Seminar	0		
Technical Electives[2]	3		
Social Science and Humanities Elective	3		

NOTES

[1] Two hours to be selected from Electrical Engineering 230, 232, or 234. One hour to be selected from Electrical Engineering 231, 233, or 235.

[2] Technical electives to be chosen from department list of approved courses.

[3] Mechanical Engineering Systems to be chosen from Mechanical Engineering 341, Mechanical Engineering 323, and other courses approved by the Department of Mechanical and Industrial Engineering.

Note: A total of eighteen hours of social science and humanities and nine hours of technical electives is required. Three hours of social science must be Economics 108, and this course is recommended for the second semester of the freshman year.

Curriculum in Metallurgical Engineering

For the Degree of Bachelor of Science in Metallurgical Engineering

The program in metallurgical engineering emphasizes physical metallurgy and permits the student, by appropriate selection of elective courses, to emphasize engineering metallurgy, metal physics, or some other well-defined career objective. A student who does not follow the engineering-oriented sequence of courses must prepare a carefully considered alternate plan of courses in consultation with his adviser and present it for departmental approval.

FIRST YEAR

Common Program for Freshmen (pages 299 and 300).

SECOND YEAR

FIRST SEMESTER	18 HOURS	SECOND SEMESTER	18 HOURS
Math. 141—Calculus and Analytic Geometry	5	C.S. 101—Introduction to Automatic Digital Computing	3
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Math. 345—Differential Equations and Orthogonal Functions	3
T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Electives[1]	4	T.A.M. 221—Elementary Mechanics of Deformable Bodies	3
Physical Education	1	T.A.M. 223—Mechanical Behavior of Solids	1
		Electives[1]	3
		Physical Education	1

THIRD YEAR	18 HOURS		18 HOURS
Cer. E. 221—Pyrometry	2	Met. E. 208—Physical Metallurgy, II or Elective[2]	3
Chem. 245—Physical Chemistry for Engineers	3	Met. E. 210—Physical Metallurgy Laboratory, II or Elective[2]	3
Met. E. 201—Physical Metallurgy, I	3	Met. E. 310—X-ray Metallography	3
Met. E. 203—Physical Metallurgy Laboratory, I	1	Met. E. 314—Metallurgical Thermodynamics	3
Met. E. 207—Extractive Metallurgy[2]	3	Electives[1]	6
Electives[1]	6		

FOURTH YEAR	17 HOURS		17 HOURS
E.E. 220—Basic Electrical Engineering	3	Met. E. 296—Metallurgical Seminar	2
Met. E. 251—Physical Metallurgy, III or Met. E. 387—Advanced Physical Metallurgy[2]	3	Met. E. 315—Metallurgical Kinetics	3
Met. E. 253—Physical Metallurgy Laboratory, III or Met. E. 388—Advanced Physical Metallurgy Laboratory	3	Met. E. 318—Introduction to Metal Physics	3
Met. E. 311—Advanced Phase Diagrams or Elective[2]	2	Electives[1]	9
Met. E. 316—Mechanical Metallurgy	3		
Electives[1]	3		

NOTES

[1] All students are required to satisfy the college requirement of 18 hours in the social sciences and humanities (see page 297). Six hours of electives are free to be selected by the student. The remaining hours are to be selected from a departmental list of electives, among which are: Cer. E. 307, 340; Chem. 122, 123, 133, 397, 398; C.S. 294, 311, 387; E.E. 232, 233, 234, 235, 288; C.E. 360; I.E. 233, 282, 333; Math, 263, 315, 343, 346, 381, 382, 387, 388; Met. E. 207, 260, 301, 302, 304, 306, 307, 311, 386; Physics 321, 322, 341, 342, 343, 344, 366, 381, 383, 385, 386, 387; T.A.M. 321, 326.

[2] Students interested in engineering physical metallurgy should follow the sequence Met. E. 207, 208, 210, 251, 253, and 311. As an alternate ta this sequence, students may elect Met. E. 387 and 388 with the remaining hours selected from the list of elective courses given above. This program is intended for students who desire greater emphasis on science- and mathematic-oriented courses, or those who have other specific career objectives. Students selecting this program are required to have a good academic record and must secure departmental approval.

Curriculum in Mining Engineering

See General Engineering for undergraduate curriculum.

Curriculum in the Teaching of Engineering Technology

For the Degree of Bachelor of Science in the Teaching of Engineering Technology

The first two years of the Electronics Option and the Mechanical Option are the same.

FIRST YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	19 HOURS
G.E. 103—Engineering Graphics, I	3	Chem. 101—General Chemistry	4
Math. 112—College Algebra	3	G.E. 104—Engineering Graphics, II	3
Math. 114—Plane Trigonometry	2	Math. 120—Calculus and Analytic Geometry	5
Psych. 100—Introduction to Psychology	4	Speech 112—Verbal Communication	4
Speech 111—Verbal Communication	4	Vo. Tech. Ed. 101—Nature of the Teaching Profession	2
Physical Education	1	Physical Education	1

SUMMER	2 HOURS
Vo. Tech. Ed. 189—Supervised Occupational Experience	2

SECOND YEAR	17 HOURS		17 HOURS
Chem. 102—General Chemistry	4	C.S. 101—Introduction to Automatic Digital Computing or Humanities Elective[1]	3
Econ. 108—Elements of Economics	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Math. 130—Calculus and Analytic Geometry	5	Math. 140—Calculus and Analytic Geometry	3
Physics 106—General Physics (Mechanics)	4	Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Physical Education	1	T.A.M. 154—Analytical Mechanics (Statics and Dynamics)	4
		Physical Education	1

SUMMER	2 HOURS
Vo. Tech. Ed. 189—Supervised Occupational Experience	2

NOTES

[1] Mechanical option requires C.S. 101; Electronics option requires humanities electives.

ELECTRONICS OPTIONS

THIRD YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 HOURS
Ed. Psych. 211—Educational Psychology	3	E.E. 229—Introduction to Electromagnetic Fields	3
E.E. 251—Electrical Engineering Laboratory, I	1	E.E. 262—Networks, II	3
E.E. 260—Networks, I	3	E.E. 310—Systems, I	3
Math. 345—Differential Equations and Orthogonal Functions	3	E.E. 330—Magnetic Circuits and Transformers	3
Social Science Elective[1]	3	E.E. 331—Magnetic Circuits and Transformer Laboratory	1
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	E.E. 340—Electronics, I	3
		E.E. 341—Electronics Experimentation	1

SUMMER **2 HOURS**

Vo. Tech. Ed. 189—Supervised Occupational Experience	2

FOURTH YEAR **17 HOURS** **15 HOURS**

E.E. 342—Advanced Electronics	3	Ed. Prac. 242—Educational Practice in Secondary Education	5
E.E. 343—Electronics Laboratory	1	E.E. 271—Electrical Engineering Problems	3
E.E. 347—Industrial Electronics	4	Vo. Tech. Ed. 381—Principles of Vocational Education	3
Humanities Elective	3	Vo. Tech. Ed. 388—Special Techniques of Teaching Vocational-Industrial Subjects	4
Social Science Elective[1]	3		
Electrical Engineering Elective	3		

MECHANICAL OPTION

THIRD YEAR

FIRST SEMESTER **18 HOURS** **SECOND SEMESTER** **16 HOURS**

Humanities Elective	3	Ed. Psych. 211—Educotional Psychology	3
M.E. 185—Technology of Production	4	E.E. 220—Basic Electrical Engineering	3
M.E. 220—Mechanics of Machinery	4	M.E. 224—Design of Machine Elements	3
Social Science Elective[1]	3	Social Science Elective[1]	3
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	Vo. Tech. Ed. 284—Advanced Metalwork	4
T.A.M. 223—Mechanical Behavior of Solids	1		

SUMMER **2 HOURS**

Vo. Tech. Ed. 189—Supervised Occupational Experience	2

FOURTH YEAR **16 HOURS** **15 HOURS**

E.E. 230—Application and Control of Motors and Equipment	2	Ed. Prac. 242—Educational Practice in Secondary Education	5
G.E. 236—Hydraulic and Pneumatic Controls	3	M.E. 241—Project Design in Machine Design Technology	4
M.E. 234—Heat Treatment of Metals	3	Vo. Tech. Ed. 381—Principles of Vocational Education	3
M.E. 271—Design of Machine Elements	3	Vo. Tech. Ed. 388—Special Techniques of Teaching Vocational-Industrial Subjects	3
Humanities Elective	3		
Elective	2		

NOTES

[1] For students interested in secondary education certification, these electives must be selected to fulfill certification requirements in political science and United States history. The course in political science must include instruction on the constitutions of Illinois and the United States.

Curriculum for the Post-Baccalaureate Certificate for Teachers of Engineering Technology

ELECTRONICS TECHNOLOGY OPTION

FIRST SUMMER	7 HOURS
E.E. 251—Electrical Engineering Laboratory, I	1
E.E. 260—Networks, I	3
E.E. 271—Electrical Engineering Problems	3

SECOND SUMMER	10 HOURS
E.E. 262—Networks, II	3
E.E. 310—Systems, I	3
E.E. 340—Electronics	3
E.E. 341—Electronics Experimentation	1

THIRD SUMMER	8 HOURS
E.E. 330—Magnetic Circuits and Transformers	3
E.E. 331—Magnetic Circuits and Transformer Laboratory	1
E.E. 342—Advanced Electronics	3
E.E. 343—Electronics Laboratory	1

FOURTH SUMMER	7 HOURS
E.E. 347—Industrial Electronics	4
Vo. Tech. Ed. 381—Principles of Vocational Education	3

MECHANICAL TECHNOLOGY OPTION

FIRST SUMMER	9 HOURS
G.E. 393—Special Problems	4
T.A.M. 256—Elements of Mechanics and Strength of Materials	5

SECOND SUMMER	8 HOURS
M.E. 221—Mechanics of Machinery	5
Vo. Tech. Ed. 284—Advanced Metalwork	3

THIRD SUMMER	9 HOURS
M.E. 224—Design of Machine Elements	3
M.E. 234—Heat Treatment of Metals	3
Vo. Tech. Ed. 381—Principles of Vocational Education	3

FOURTH SUMMER	6 HOURS
M.E. 271—Design of Machine Elements	3
M.E. 341—Engineering Analysis and Design	3

The University of Illinois Symphony Orchestra in rehearsal room of Krannert Center for the Performing Arts.

College of Fine and Applied Arts

Architecture, art, dance, landscape architecture, music, theatre, and urban and regional planning are taught in the College of Fine and Applied Arts. The professional curricula in all these subjects admit freshmen. In each curriculum students are required to complete certain basic courses, professional courses, and general education requirements including a minimum approved sequence of six semester hours each in the humanities, social sciences, and natural sciences. Electives and sequences must be chosen from the list approved by the college.

For students enrolled in other colleges and schools of the University of Illinois at Urbana-Champaign, the College of Fine and Applied Arts offers introductory courses designed to increase aesthetic appreciation and to portray the role of the arts in civilization. The college also offers courses in applied music.

The activities of the college are prominently featured in the Festival of Contemporary Arts held biennially in March. The last Festival was in 1971. Exhibitions, concerts, lectures, performances, demonstrations, and conferences within the areas of art, architecture, urban and regional planning, landscape architecture, theatre, dance, and music have been important features of the Festivals. Many outstanding professional workers in these fields have been brought to the University for these events. The University's permanent collection of contemporary American painting and sculpture has been largely formed from the Festival exhibitions. Fields outside the college, such as typographical design, home economics, literature, motion pictures, and television have also scheduled important events during the Festivals. The Krannert Center for the Performing Arts, which provides excellent facilities for orchestra, opera, choral organizations, theatre, and dance, was completed in the 1968–1969 academic year.

In addition to its teaching divisions and the Krannert Center, the college includes the Bureau of Urban–Regional Planning Research, the Small Homes Council–Building Research Council, the University Bands, and the Krannert Art Museum.

REQUIREMENTS FOR GRADUATION

Students who meet the general University requirements with reference to registration, residence, scholarship, fees, physical education, rhetoric, and general education requirements, and who maintain a satisfactory record, receive degrees appropriate to the

curriculum completed. In addition, students must complete the required senior courses in their major field of study in residence.

HONORS AT GRADUATION

At graduation, the College of Fine and Applied Arts grants honors to superior students. To be eligible, students must have completed a minimum of four semesters of work or sixty-five hours of credit in residence at the University and be recommended by the faculty. For the degree with Honors, the student must have an average of 4.0 or better, in all courses used for graduation; for the degree with High Honors, an average of 4.25 or better; and for the degree with Highest Honors, an average of 4.5 or better. Credit earned at other institutions and transferred to the University of Illinois is used in computing the student's average; credit earned at Illinois must be of at least the level required for each degree of honors.

LIBRARIES

Students in the college have at their disposal outstanding library resources. In addition to the general Library, one of this country's great university collections, there are specialized libraries serving the needs of specific fields. The Ricker Library of Architecture and Art contains more than 31,000 books (with at least as many more in the same fields in the general Library), 31,000 photographs, and 9,300 clippings.

THE KRANNERT CENTER FOR THE PERFORMING ARTS

The Center, completed in 1969, provides remarkable facilities for orchestra, opera, choral organization, theatre, and dance. The Great Hall, seating 2,200, is designed for large-scale musical events. The Festival Theatre, with 1,000 seats, is for opera and other musical stage productions. The Playhouse seats 700 and is the home of the University Theatre. The Studio Theatre, seating 250, is for experimental productions. An outdoor amphitheatre, rehearsal rooms, offices, dressing rooms, technical rooms, and underground parking on two levels for 650 cars complete this monumental facility. The major donors of the Center are Mr. and Mrs. Herman C. Krannert of Indianapolis.

DEPARTMENTS, DIVISIONS, AND CURRICULA

The College of Fine and Applied Arts consists of the Department of Architecture, the Department of Art, the Department of Urban and Regional Planning, the Department of Landscape Architecture, the Department of Theatre, the Department of Dance, the School of Music, the University Bands, the Bureau of Urban and Regional Planning Research, the Small Homes Council–Building Research Council, the Krannert Art Museum, and the Krannert Center for the Performing Arts. The undergraduate curricula, which are described in the following paragraphs, are outlined on subsequent pages.

All departments in the College of Fine and Applied Arts reserve the right to retain, exhibit, and reproduce the work submitted by students for credit in any course.

Architecture. Architecture is concerned with shaping of man's physical environment. In accomplishing this, the architect has the responsibility and opportunity of providing for the optimal physical, psychological, and social well-being of man. Consequently, the education of the future architect must include a clear understanding of the function of architecture in society and must be directed towards the acquisition of all professional skills necessary to effectively achieve this. Architecture is both an art and a science, requiring of its practitioners penetrating insight accompanied by creative imagination and an ever expanding knowledge of contemporary technology.

The Department of Architecture currently offers a continuing five-year undergraduate curriculum and a new four-year undergraduate curriculum. Each endeavors to provide that educational environment which will foster scholarship, research, and competence for the practice of the profession. They are designed to impart a basic understanding of man and society, visual fundamentals, structural theory and structural systems, building materials and methods of construction, systems of environmental control, comprehensive architectural design, and a fundamental understanding of the ecological, social, and economic factors that relate to environmental design.

The new four-year undergraduate curriculum leading to the degree of Bachelor of Science in Architectural Studies and a two-year graduate curriculum leading to the de-

gree of Master of Architecture comprise a new six-year program in architecture. Students completing the four-year curriculum will acquire a knowledge of architecture sufficient to prepare them for many roles in architecture, planning, and the construction industry. However, the completion of two additional years is considered as the preparation necessary to ultimate professional standing. Students who begin their architectural studies at the University of Illinois at Urbana-Champaign after September, 1969, must enroll in the six-year program.

The continuing five-year undergraduate curriculum provides two options, general and engineering, leading to the degree of Bachelor of Architecture. Students who began their architecture studies at the University of Illinois at Urbana-Champaign before September, 1969, may enroll in the five-year curriculum. One-year graduate curricula leading to degrees of Master of Architecture and Master of Science in Architectural Engineering are offered under regulations of the Graduate College. The five-year undergraduate curriculum is now being phased out.

In February, 1967, the Department of Architecture began a foreign study program with base of operations in France. Advanced architectural students may enroll in this program in which students study appropriate courses in France, and analyze significant European cities and historic buildings while on extended week-end trips. Students also take guided tours through Europe before arriving in France and after completing course work there.

The Department of Architecture occupies drafting rooms, lecture rooms, and offices in the Architecture Building and the Fine and Applied Arts Building. The Ricker Library of Architecture and Art also occupies space in the Architecture Building.

Art. All first-year students in art, except those electing Art Education or History of Art, will be admitted to the General Curriculum in Art. After completing at least one year in the General Curriculum, but before beginning their third year of work, such students must select one of the more specialized art curricula. Except for the curriculum in the history of art, all applicants for admission into art are required to submit a qualifying portfolio of art work prior to approval for admission. The art work submitted need not be work produced in formal art classes or under instruction. Potential new students who have a strong interest in art but who have not enjoyed the advantage of art instruction are encouraged to submit examples of work which they have produced on their own. Detailed instructions concerning the content of the portfolio and procedures for submitting it will be sent to all applicants by the Office of Admission and Records upon receipt of the completed application.

The curricula in art permit a student to attain a proficiency in art and to secure a liberal education. The first year of each curriculum is basic and cultural. Specialization begins in the second year in the following areas:

The curriculum in art education prepares students for positions as teachers and supervisors of art in the public schools. The program places emphasis on methods, materials, processes, and practice teaching in selected Illinois schools. Upon completion, graduates are eligible for the State Special Certificate as defined by the Illinois State Teacher Certification Board.

The curriculum in crafts emphasizes professional training for the development of the self-sustaining craftsman, the teacher of crafts, and the designer-craftsman in industry. The present curriculum provides a choice of two areas of concentration: ceramic design and metal design. The emphasis within these areas of concentration is upon the development of individual design capabilities and perceptions and upon the mastery of comprehensive technical skills. In conjunction with these individual areas of emphasis, each student is given experience in other craft media.

The curriculum in graphic design prepares the student for entrance into the field of visual communications, including commercial, educational, and informational applications. Problems explore printed design in two and three dimensions, the filmic media including photography, film making, and television, and the interrelationship of pertinent disciplines such as journalism, communications, advertising, and marketing. Emphasis is placed on a balance of technical and conceptual skills, and on the expansion of the student's knowledge of the process employed by the designer in visual problem solving. Each assignment is taken through analysis, research, organization, aesthetics, and technical execution—from concept through final presentation.

The curriculum in the history of art offers a broad cultural education which unites academic and studio training, prepares students for certain types of museum and gallery work, and qualifies them for further study in criticism and scholarship. Those who are preparing for teaching the history of art on the college level are ordinarily expected to undertake graduate study for the Master of Arts degree in this field.

The curriculum in industrial design prepares designers for three-dimensional design

in industry and commerce—the design of products, interiors, and displays. The student may elect either the structural emphasis which includes mathematics and mechanics, or the art emphasis. Emphasis is directed toward giving the student a thorough understanding of the principles of good design, resourcefulness of expression, discriminating perception, and the ability to adapt himself to the conditions of industry.

The curriculum in medical art offers extensive and intensive training leading to professional competence in the field of medical illustration. The program consists of five years of study, the first three years in art at Urbana-Champaign and the fourth and fifth years at the Medical Center in Chicago. The final two years include work in the anatomy laboratories and in medical art studios to develop skills and techniques in all media of illustration.

The curriculum in painting provides an extensive training as preparation for professional practice in painting and printmaking in their various aspects. The first two years are devoted primarily to the study of design and composition and the acquisition of representational skills; the last two years to the development of creative expression in painting, drawing, printmaking, and other media. When followed by a program leading to the degree of Master of Fine Arts in painting and printmaking, this curriculum is recommended as preparation for teaching painting and related subjects at the college level.

The curriculum in sculpture provides a broad and solid foundation in the fundamental disciplines of drawing, design, and painting, including both traditional and contemporary concepts. The learning of the time-honored techniques of sculpture such as modeling and carving is required, and experimentation with welding, metal casting, plastics, etc., is fostered. The student is encouraged to experience a wide range of materials, techniques, methods, and styles.

Courses in the history and appreciation of art and certain courses in studio work are open to students from other colleges of the University.

Students who have attended another college, university, or professional art school, and who wish to apply for transfer credit in art, must submit examples of studio work completed at that institution. To transfer from any other curriculum in the University, a student must have, in addition to the specific entrance requirements, a 3.25 average. Transfer credit is determined upon review of these examples by members of the art faculty and is considered conditional and subject to the student's satisfactory performance in assigned courses.

Under the regulations of the Graduate College, two master's degrees in art are offered. The degree of Master of Arts is offered with a major in either art history or art education, and the degree of Master of Fine Arts with a major in painting and printmaking, in design, or in sculpture.

The degree Doctor of Philosophy in the History of Art is offered jointly by the Department of Art and the Department of Architecture under the regulations of the Graduate College.

The degree Doctor of Education in Art Education is offered jointly by the Department of Art and the College of Education under the regulations of the Graduate College.

The Department of Art occupies studios, drafting rooms, and offices in nine different University buildings. The departmental faculty offices are in the Fine and Applied Arts Building, and the greater portion of the work is carried on there. The graduate painting studios are at 26 East Springfield Avenue, Champaign.

Dance. Effective September, 1971, all applicants for the dance curricula, the Bachelor of Fine Arts in Dance or the Bachelor of Arts in the Teaching of Dance, are required to satisfy a qualifying audition prior to approval for admission. Potential new students who have a strong interest in dance but who have not had formal training are encouraged to audition. Instructions regarding the scheduling and content of auditions will be sent to all applicants by the Office of Admissions and Records upon the receipt of completed application.

The Bachelor of Fine Arts in Dance is a program offering pre-professional training in modern dance performance and composition with opportunity for study in ballet technique. The curriculum includes liberal arts courses as well as professional dance training. The presentation of a satisfactory senior project is a degree requirement for the Bachelor of Fine Arts in Dance. The program is designed to prepare dancers, with further training, for professional work with a dance company as well as for teaching dance in private studios and schools, colleges, and universities. Students are also prepared to enter graduate school for further academic work in dance.

Upon completion of the Bachelor of Arts in the Teaching of Dance degree, graduates are eligible for the State Special Certificate as defined by the Illinois State Certification

Board and are prepared to teach dance in the public schools, elementary through high school levels. In this degree program, emphasis is placed upon a strong professional dance background as well as liberal arts courses and fulfillment of teacher certification requirements.

Dance is an art form using movement as its medium of expression, and within the dance major curricula emphasis is placed on movement proficiency and understanding. Students are required to enroll in a daily modern technique class while in residence and must achieve the level of advanced technique prior to graduation. An environment is provided in which the dance students may begin to develop as artists-choreographers. A dance composition sequence begins with improvisation and continues through beginning, intermediate, and advanced composition culminating with dance production workshop. The dance curricula also include musical training for dancers, ballet technique, dance teaching methods courses, and theory courses in dance history, theory, and philosophy. Dancers rehearse and perform in student works as well as those of faculty and guest choreographers.

The Krannert Center for the Performing Arts houses the Department of Dance office and a large studio with mirrors and barres. Theatre space in the Center is also available for dance performances. Other studios are located at 1115 West Oregon Street, adjacent to the Krannert Center, and in Freer Gymnasium. A space for individual technical practice is also provided at 901 West Illinois Street.

Landscape Architecture. The Department of Landscape Architecture offers a four-year undergraduate curriculum for the professional degree of Bachelor of Landscape Architecture and a graduate curriculum for the advanced degree of Master of Landscape Architecture.

The undergraduate curriculum is a balanced program of technical, design, and general education courses which equip the student with the necessary skills for professional practice in private offices or public agencies. The graduate curriculum offers advanced work and opportunities for specialization in selected areas towards potential careers in teaching, public service, or private practice.

The Department of Landscape Architecture occupies quarters in Mumford Hall, wherein are located the department library, design studios, classrooms, and staff offices. Additional studio and office facilities are located in Mumford House.

Music. All applicants for music curricula are required to satisfy a qualifying audition in the major performance area prior to approval for admission. Auditions are held on one Saturday during October, November, December, and January, and on several other designated dates during the year. Applicants who cannot appear in person may submit tape recordings, but all are urged to complete the requirement as early as possible to expedite approval for admission. Each applicant must write to the Director of the School of Music, mentioning his performance area and curriculum, to make specific audition arrangements.

The School of Music offers a curriculum in music, with four options leading to the degree of Bachelor of Music, and a curriculum in music education with vocal-choral or instrumental emphasis, leading to the degree of Bachelor of Science in Music Education. A student enrolled in any applied music curriculum pursues throughout the four years of his course a major applied subject (piano, voice, etc.) in which two thirty-minute lessons a week are taken; and a minor or secondary applied subject in which one thirty-minute lesson a week is taken for two years. Students in composition and history of music must complete sixteen hours in the major applied music subject. Public performance is a definite part of the training in applied music, and all students, when sufficiently advanced, are required to participate in student programs. As part of the requirements for the Bachelor of Music degree in applied music and composition, senior students must present a satisfactory public recital.

Courses leading to the Bachelor of Arts degree with a major in music in the College of Liberal Arts and Sciences are offered to qualified students. Courses in music leading to this degree and predominantly in the fields of theory, history, and applied music. Applicants are expected to have a rudimentary knowledge of theory and to possess a moderate degree of proficiency on the piano. (See sciences and letters curriculum in Liberal Arts and Sciences, page 363.)

Applied music and courses in the history, theory, and appreciation of music are open to all qualified students in the University.

Graduate courses leading to the degree of Master of Music, Master of Science in Music Education, Advanced Certificate in Music Education, Doctor of Education in Music Education, Doctor of Philosophy in Musicology, and Doctor of Musical Arts in Composition, Choral Music, and Performance and Literature are offered under the regulations of the Graduate College.

The University Symphony Orchestra, Chamber Orchestra, Wind Ensemble, Jazz Bands, University choral groups (Oratorio Society, University Chorus, Women's Glee Club, Men's Glee Club, University Choir) and small vocal ensembles are open to qualified students from any college. The Oratorio Society, University Chorus, Madrigal Singers, Opera Group, and other ensembles are also open to members of the faculty and staff and residents of the community who are admitted by audition or by permission of the respective conductors.

The faculty and students of the School of Music present concerts and recitals each week of the school year. The School of Music also presents frequent radio broadcasts on and off campus and participates in television programs. Chamber music concerts are given frequently throughout the year by the Walden Quartet of the University of Illinois, whose members are artists-in-residence, and members of the faculty of the School of Music. Faculty artists and student musical groups are available for off-campus performances through the Music Section of the Division of University Extension, 608 South Mathews Avenue, Urbana.

The School of Music occupies the Tina Weedon Smith Memorial Hall with soundproof studios, lecture rooms, and classrooms extensively equipped with musical instruments, a library, and auditorium designed for public recitals and concerts, eight annex areas, and the Krannert Center for the Performing Arts. A new music building, currently under construction, is scheduled for completion in 1971.

Theatre. The Department of Theatre offers four-year curricula leading to the degree of Bachelor of Fine Arts in Theatre with majors in three areas: acting, bases of directing and playwriting, and technology and design. These provide basic knowledge and training for the student who plans to pursue graduate studies, for the student who seeks to qualify as a technician, for the student who wishes to prepare for apprenticeship in a professional theatre company, and for the student without professional aims who wishes to specialize in a discipline which has strong affinities with both the liberal arts and the fine arts.

The department is housed in the Krannert Center for the Performing Arts, and the theatres and shops of the Center serve as laboratories for the theatre students, who practice the arts of the theatre in a program of productions of plays, opera, and dance.

Urban and Regional Planning. The Department of Urban and Regional Planning offers an undergraduate curriculum and graduate work toward the Master of Urban Planning.

The undergraduate four-year curriculum in urban planning leads to the degree of Bachelor of Urban Planning. It provides the student not only with basic competence within the areas of urban and/or regional planning but also with a grounding in social science and in other areas appropriate to training for a public service profession.

The department headquarters are at 909 West Nevada Street, Urbana. Classroom and studio space are located in Mumford Hall, Bevier Hall, and 1201 and 1203 West California Avenue, Urbana.

The Bureau of Urban and Regional Planning Research, located at 1201 and 1202 West California Avenue, is an integral component of the department. Its program includes short courses and institutes for planning professionals and laymen, extension work throughout the state in cooperation with the College of Agriculture, and publication of the internationally-known *Quarterly Digest of Urban and Regional Research,* in addition to a variety of planning research efforts.

ELECTIVES AND GENERAL EDUCATION SEQUENCE REQUIREMENTS

Electives specified in any curriculum in the College of Fine and Applied Arts must be chosen from the lists which follow. Single courses specified in the sequence lists or more advanced courses for which they are prerequisite may also be used as electives.

GENERAL EDUCATION SEQUENCES

To comply with the general education requirements, each student must have a minimum approved sequence of six semester hours in the humanities, the natural sciences, and the social sciences, respectively. They should be taken to fulfill electives if they are not listed as a specific curricular requirement.

Note: Approval to use any course not contained in these lists must be requested by written petition to the Associate Dean of the College prior to registration in the substitute course or courses. Approval of an instructor or adviser is not acceptable.

HUMANITIES SEQUENCES

Architecture 211, 212 plus 300-level course in History of Architecture or Philosophy 323 (no architecture and art majors)
Art 111, 112 plus 200 or 300-level courses in History of Art or Philosophy 323 (no architecture and art majors)
Art 327, 328 (no architecture and art majors)
History 191, Japanese 205, Art 327
History 191, Chinese 205, Art 328
Chinese 205, 206
Classical Civilization 301, 302; 361, 362; 110, 111, 112
Comparative Literature—any eight hours; 363, 364
English 101, 102, 103; 115, 116, and 131, or advanced course involving study of literature in depth
English 195, 196; 221, 311; 231, 232; 231, 235; 251, 252, 253, 287 (any three); 255, 256; 257, 258; 338, 339, 340 (any two); 342, 345; 348, 349; 386, 387
Foreign language—six or more hours involving literature or related humanistic studies using one foreign language at the 200-level or above; or completion of intermediate-level of a new foreign language, if not used for entrance or curriculum requirements; or completion of intermediate-level of any foreign language (if not a curriculum requirement) plus one advanced course involving study of literature or related humanistic studies using that language
French 255, 256
History 181, 182 plus Classical Civilization 110 or 111 or 112 or 301 or 302 or 361 or 362
History 191, 192 plus one humanities course in Asian studies (Chinese 205, 206; Japanese 205, 206; Hindi 309, 310; Art 327, 328)
History 301, 302; 303, 304, 305 (any two); 302, 306; 323, 324; 338, 349; 371, 372; 393, 398; 395, 396; 397, 399; 309, 310
Humanities 151, 152; 211, 212; 363, 364
Linguistics 338, Philosophy 101
Music 130, 131; 130, 316, 317 (no music majors)
Philosophy 101, 102; 303, 306
Philosophy 101 or 195 plus one of: 102, 103, 104, 110, 321, 323, 324, 326, 335
Philosophy 303 plus 304 or 306, or 390 or 310
Russian 115, 116; 332, Slavic 331.
Speech 141, 243, 342, 345 (any nine hours)
Speech 311, 312 plus advanced course involving study of literature in depth
Speech 307, 308; 361, 362
Theatre 361, 362 (no theatre majors)

SOCIAL SCIENCE SEQUENCES

Anthropology 102, 103; 240, 340; 102 or 103 plus 220 or 240 or 260 or 280
Economics 108 plus 214 or 240 or 255 or 288 or 306 or 328 or 350
Geography 104, 105; 210 plus 220 or 241 or 386; 369, 374
History 191, 192; 209, 210; 247, 248; 260, 261, 262 (any two); 315, 316; 387, 388; 391, 392
Liberal Arts and Sciences 174 plus Anthropology 103 or Political Science 150 or Sociology 100
Linguistics 300 plus 301 or 302 or 305
Political Science 150 plus History 151 or 152 or 261 or 262
Political Science 150 plus 151 or Liberal Arts and Science 174; 184, 191; 191, 192; 150, 184 plus Journalism 215
Psychology 100, 201; 105 plus 201 or 216 or 248 or 250
Psychology 100 or 103 plus 201 or 216 or 250 or 338
Sociology 151, 152 or 275; 100 plus 212 or 218 or 223 or 255; any eight hours that do not duplicate course content

HUMANITIES OR SOCIAL SCIENCE SEQUENCES

Note: Any of these sequences can be used to fulfill either a Humanities or a Social Science sequence.

History 111, 112; 131, 132; 151, 152; 307, 308; 381, 382; 383, 384
Philosophy 101, 329; 103, 104

NATURAL SCIENCE SEQUENCES

Astronomy—any eight hours (recommended 101, 102)
Chemistry—any eight hours (recommend 101, 102)
Geography 102, 103 (new numbers) or 102, 103, plus 313
Geology—any eight hours (recommend 101, 102)
Liberal Arts and Sciences 141, 142; 197, 198
Life Sciences—any eight hours (recommend Biology 100, 101; especially for non-biology majors)
Physiology 103 or 203 and Psychology 103
Zoology 104
Botany 100, 101, Entomology 103
Microbiology 100, 101
Physiology 103 or 203, plus 234
Zoology 106, 107 (for students in teacher education program only)
Mathematics—any six hours except 101, 104, 202, 203, 305, 306, 307 (can not duplicate high school entrance or curricula requirements or prerequisities)
Physics—any eight hours

ELECTIVE AREAS

Unless a course is specified in a curriculum (such as Mathematics 202, Mathematics for Elementary Teachers), or is a prerequisite or is similar in content, all of the courses offered by the following departments qualify as electives (often called "general electives, academic electives, or Liberal Arts and Sciences electives" by advisers).
Anthropology
Architecture, especially Architecture 211, 212, 310 to 317 (no courses usable for architecture majors as electives; 211–212 not for art majors)
Art, especially Art 105 to 112, 115, 116, 181, 186, 209 to 216, 301 to 328, 388 (no courses usable for art majors as electives, only 209 and up on this list for architecture majors)
Asian Studies
Astronomy
Bands, up to two hours (not for music majors)
Chemistry
Classics
Comparative Literature
Computer Science
Dance, especially Dance 101, 102, 160, 161, 165, 166, 340 (not for dance majors)
Economics
English
French
Geography
Geology
Germanic Languages and Literature
History
Humanities
Labor and Industrial Relations
Landscape Architecture, especially Landscape Architecture 214 (not for landscape architecture or architecture majors)
Latin-American Studies
Liberal Arts and Sciences
Life Sciences
Linguistics
Mathematics
Music, especially 100 to 104, 113, 130, 131 (not for music majors)
Philosophy
Physics
Political Science
Psychology
Slavic Languages and Literature
Social Sciences
Sociology
Spanish, Italian, and Portuguese
Speech

Theatre, especially Theatre 101, 102, 103, 104, 105, 281, 352, 361, 362, 366, 380 (not for theatre majors)
Urban Planning, especially Urban Planning 171 (not for urban planning or architecture majors)

SPECIFIC ELECTIVE COURSES

The following list of courses available as electives offers specialized areas of knowledge not found in previous lists. These courses have obvious professional values to many in Fine and Applied Arts; other courses may simply be personally informative or significant. No more than nine hours of courses in any one of these areas should be taken.
Accountancy 101, 105, 201, 203
Agricultural Economics 100
Agronomy 101, 121, 350
Business Administration 202, 210, 247, 249, 272, 323, 337, 344
Civil Engineering 215, 230, 231, 314
Communications 220, 251
Electrical Engineering 114, 271, 272, 288
General Engineering, 200 and 300-level
Finance 150
Health Education 200
History and Philosophy of Education 300, 305
Industrial Administration 261
Journalism 215, 220, 251, 310
Mechanical and Industrial Engineering, all courses
Radio and Television 356
Religion (maximum of six hours)
Air Force Aerospace Studies, Military Science, and Naval Science, advanced courses only (maximum of six hours)

Six-Year Program in Architecture

This program consists of a four-year undergraduate curriculum leading to the degree Bachelor of Science in Architectural Studies and a two-year graduate curriculum leading to the degree of Master of Architecture.

Four-Year Curriculum in Architecture

For the Degree of Bachelor of Science in Architectural Studies

Students who begin their studies at the University of Illinois at Urbana-Champaign in or after September, 1969, must enroll in the four-year curriculum in architecture. In the curriculum, normal course progress is imperative. A student failing to complete any required course more than one semester later than the time designated in the curriculum is prohibited from progressive registration in architectural courses until the deficiency is corrected. For the degree of Bachelor of Science in Architectural Studies, 124 semester hours plus physical education are required.

FIRST YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
First offered fall semester, 1969.		First offered spring semester, 1970.	
Arch. 100—Architecture Lectures	0	Hist. 112—History of Western Civilization, 1815 to Present	4
Hist. 111—History of Western Civilization to 1815	4	Sociol. 152—The Study of Society, II	4
Math. 120—Calculus and Analytical Geometry	5	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Math. 130—Calculus and Analytical Geometry	5
Sociol. 151—The Study of Society, I	4	Physical Education	1
Physical Education	1		

SECOND YEAR	15 HOURS		15 HOURS
First offered fall semester, 1970.		First offered spring semester, 1971.	
Arch. 171—Basic Design Studio, I	3	Arch. 172—Basic Design Studio, II	3
Elective Sequence	4	Elective Sequence	4
L.A.S. 141—Physical Science, I	4	C.S. 101—Introduction to Automatic Digital Computing	3
U.P. 171—Planning of Cities and Regions	3	L.A.S. 142—Physical Science, II	4
Physical Education	1	Physical Education	1

THIRD YEAR	17 HOURS		16 HOURS
First offered fall semester, 1971.		First offered spring semester, 1972.	
Arch. 211—Introduction to Ancient and Medieval Architecture	3	Arch. 212—Introduction to Renoissance and Modern Architecture	3
Arch. 231—Architectural Construction, I	4	Arch. 232—Architectural Construction, II	3
Arch. 251—Statics and Dynamics	4	Arch. 252—Strength of Materials and Design Applications	4
Arch. 271—Basic Design Studio, III	3	Arch. 272—Basic Design Studio, IV	3
Elective	3	Elective	3

FOURTH YEAR	16 HOURS		15 HOURS
First offered fall semester, 1972.		First offered spring semester, 1973.	
Architectural History (310 to 317)	3	Architectural History (310 to 317)	3
Arch. 241—Environmental Technology, I	4	Arch. 242—Environmental Technology, II	4
Arch. 351—Theory and Design of Metal Structures	4	Arch. 352—Theory of Reinforced Concrete	3
Arch. 371—Architectural Design Studio, I	5	Arch. 372—Architectural Design Studio, II	5

Beginning in September 1973, a new two-year graduate curriculum in architecture will be offered leading to the degree Master of Architecture. Successful completion of the two-year graduate curriculum is considered as the preparation necessary to ultimate professional standing.

Five-Year Curriculum in Architecture

Students who began their architecture studies at the University of Illinois at Urbana-Champaign before September, 1969, may enroll in the five-year curriculum in architecture. Transfer and release students should consult with the Associate Dean of the College of Fine and Applied Arts, 114 Architecture Building, to determine eligibility for transferring into the five-year curriculum. In the curriculum, normal course progress is imperative. A student failing to complete any required course more than one semester later than the time designated in the curriculum is prohibited from progressive registration in architectural courses until the deficiency is corrected. For the degree of Bachelor of Architecture, 157 semester hours plus physical education are required.

GENERAL OPTION

For the Degree of Bachelor of Architecture

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	14 HOURS
Art 181—Freehand Drawing	2	Arch. 101—Architectural Design, I	3
G.E. 107—Geometry for Architects	2	Art 182—Freehand Drawing	2
Math. 120—Calculus and Analytic Geometry	5	G.E. 108—Geometry for Architects	2
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Electives	3	Electives	3
Physical Education	1	Physical Education	1

SECOND YEAR	15 HOURS		18 HOURS
Arch. 131—Architectural Design, II	3	Arch. 211—Introduction to Ancient and Medieval Architecture	3
Arch. 141—Building Construction, I	2	Arch. 132—Architectural Design, III	3
Art 183—Freehand Drawing	2	Arch. 142—Building Construction, II	2
L.A.S. 141—Physical Science, I	4	Art 184—Freehand Drawing	2
Electives	3	L.A.S. 142—Physical Science, II	4
Physical Education	1	T.A.M. 171—Elements of Mechanics	3
		Physical Education	1

THIRD YEAR	16 HOURS		16 HOURS
Arch. 212—Introduction to Renaissance and Modern Architecture	3	Architectural History Elective	3
Arch. 233—Architectural Design, IV	3	Arch. 234—Architectural Design, V	3
Arch. 241—Building Construction, III	2	Arch. 242—Building Construction, IV	2
Art 281—Freehand Drawing	2	Arch. 245—Structural Elements	3
Soc. Sci. Elect.	3	Art 282—Freehand Drawing	2
T.A.M. 172—Strength of Materials	3	Electives	3

FOURTH YEAR	16 HOURS		17 HOURS
Architectural History Elective	3	Arch. 236—Architectural Design, VII	5
Arch. 235—Architectural Design, VI	5	Arch. 256—Building Sanitation and Acoustics	2
Arch. 246—Theory of Structural Design.	3	Arch. 257—Reinforced Concrete Theory	3
Elective (general or technical)	2	M.E. 252—Heating and Air Conditioning for Architects	4
U.P. 171 Planning Cities and Regions	3	Electives	3

FIFTH YEAR	17 HOURS		16 HOURS
Arch. 247—Structural Planning	3	Arch. 283—Architectural Practice	2
Arch. 344—Construction Documents	2	Arch. 338—Architectural Design, IX	7
Arch. 337—Architectural Design, VIII	7	E.E. 114—Wiring and Illumination	3
Art 151—Sculpture	2	Electives	4
Electives	3		

ENGINEERING OPTION

For the Degree of Bachelor of Architecture

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	16 HOURS
Art 181—Freehand Drawing	2	Arch. 101—Architectural Design, I	3
G.E. 107—Geometry for Architects	2	Art 182—Freehand Drawing	2
Math. 120—Calculus and Analytic Geometry	5	G.E. 108—Geometry for Architects	2
Rhet. 101—Rhetoric and Composition	3	Math. 130—Calculus and Analytic Geometry	5
Electives	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1

SECOND YEAR	15 HOURS		17 HOURS
Arch. 131—Architectural Design, II	3	Arch. 211—Introduction to Ancient and Medieval Architecture	3
Arch. 141—Building Construction, I	2	Arch. 132—Architectural Design, III	3
Art 183—Freehand Drawing	2	Arch. 142—Building Construction, II	2
L.A.S. 141—Physical Science, I	4	Art 184—Freehand Drawing	2
Math. 140—Calculus and Analytic Geometry	3	L.A.S. 142—Physical Science, II	4
Physical Education	1	T.A.M. 150—Analytical Mechanics (Statics)	2
		Physical Education	1

THIRD YEAR	17 HOURS		16 HOURS
Arch. 212—Introduction to Renaissance and Modern Architecture	3	Architectural History Elective	3
Arch. 233—Architectural Design, IV	3	Arch. 234—Architectural Design, V	3
Arch. 241—Building Construction, III	2	Arch. 242—Building Construction, IV	2
Art 281—Freehand Drawing	2	Arch. 245—Structural Elements	3
Soc. Sci. Elect.	3	Art 282—Freehand Drawing	2
T.A.M. 221—Elementary Mechanics of Deformable Bodies	3	Electives	3
T.A.M. 223—Mechanical Behavior of Solids	1		

FOURTH YEAR	16 HOURS		17 HOURS
Architectural History Elective	3	Arch. 236—Architectural Design, VII	5
Arch. 235—Architectural Design, VI	5	Arch. 256—Building Sanitation and Acoustics	2
Arch. 246—Theory of Structural Design	3	Arch. 257—Reinforced Concrete Theory	3
Elective (general or technical)	2	M.E. 252—Heating and Air Conditioning for Architects	4
Electives	3	Electives	3

FIFTH YEAR	16 HOURS		15 HOURS
Arch. 247—Structural Planning	3	Arch. 283—Architectural Practice	2
Arch. 344—Construction Documents	2	Arch. 348—Advanced Structures	5
Arch. 347—Theory of Structures	5	Arch. 358—Reinforced Concrete Design	3
T.A.M. 211—Analytical Mechanics (Dynamics)	3	E.E. 114—Wiring and Illumination	3
Electives	3	Electives	2

Curricula in Art

Students in any art curriculum who enter the University after June 1, 1965, to proceed in junior level art courses must have earned a cumulative average of at least 3.25. The cumulative average is to be computed as follows: (1) all University of Illinois courses; (2) the combination of University of Illinois and transfer courses, the lowest of these to govern.

The first year is common to all curricula in art.

FIRST YEAR FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
Art 113—Orientation to Art	1	Art 114—Orientation to Art	1
Art 117—Drawing	3	Art 118—Drawing	3
Art 119—Design	3	Art 120—Design	3
Foreign Language or Elective	4 or 3	Foreign Language or Elective	4 or 3
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1
Art or Academic Elective	2 or 3	Art or Academic Elective	2 or 3

Curriculum in Art Education

For the Degree of Bachelor of Fine Arts in Art Education

The courses outlined below total 134 hours. A minimum of 130 hours of credit, not counting the first two years of military training and physical education, is required for graduation. This curriculum prepares its graduates for teaching art in the public schools.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
Art 113—Orientation to Art	1	Art 114—Orientation to Art	1
Art 117—Drawing	3	Art 118—Drawing	3
Art 119—Design	3	Art 120—Design	3
Art 121—Drawing Theory	2	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Foreign Language or Elective[1]	3 or 4
Foreign Language or Elective[1]	3	Physical Education	1
Physical Education	1	Art or Academic Elective	2 or 3
Art or Academic Elective	2 or 3		

SECOND YEAR

	17 HOURS		17 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 125—Life Drawing	2	Art 126—Life Drawing	2
Art 131—Elementary Composition	2	Art 132—Elementary Composition	2
Psych. 100—Introduction to Psychology	4	Hist. Phil. Ed. 201—Foundations of American Education	2
Electives (Natural Science Sequence)[1]	3	Electives (Natural Science Sequence)[1]	5
Art Electives[2]	2	Art Electives[2]	2
Physical Education	1	Physical Education	1

THIRD YEAR

	18 HOURS		16 HOURS
Art 192–197—Crafts[3]	2	Art 192–197—Crafts[3]	2
Art 204—Art Education Laboratory	2	Art 206—Creative Art for Children	3
Elem. Ed. 337—Art Education in the Elementary School	3	Sec. Ed. 240—Principles of Secondary Education	2
Speech 101—Principles of Effective Speaking	3	Art Electives[2]	3
Art Electives[2]	3	Electives (Humanities Sequence)[1]	3
Electives (Humanities Sequence)[1]	5	Pol. Sci.	3

FOURTH YEAR

	16 HOURS		18 HOURS
Art 201—Watercolor, I	2	Advanced Art History	3
Ed. Prac. 242—Educational Practice in Secondary Education	5	Art 208—Organization of Public School Art Programs	3
Ed. Psych. 211—Educational Psychology	3	Art Electives[2]	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	3	Electives[1]	8
Hist. 261	3		

NOTES

[1] Electives must include a minimum approved sequence of six semester hours in the humanities, social sciences, and natural sciences respectively. All teacher education curricula must include one course in United States history and one course in political science which covers both the Illinois and Federal Constitutions. One course in history and one course in political science selected from the following fulfill the requirements: History 151, 152, 260, 261, 262; Political Science 150, 191.

[2] In addition to specified courses in art, a minimum of eight semester hours must be acquired in one of the following areas of specialization: sculpture, painting, crafts, printmaking, graphic design, or art history.

[3] Select any of the two-hour craft courses offered, provided the necessary prerequisites are met. The craft courses offered are as follows: Art 192—Metalwork and Jewelry, I; Art 193—Metalwork and Jewelry, II; Art 194—Pottery, I; Art 195—Pottery, II; Art 196—Leatherwork, I; Art 197—Leatherwork, II.

Teacher Education Minor in Art Education

	HOURS
Art 105—Introduction to Watercolor Painting	2
Art 111—Introduction to Ancient and Medieval Art	3
Art 112—Introduction to Renaissance and Modern Art	3
Art 117—Drawing	2
Art 119—Design	2
Art 192–197—Crafts	4
Art 203—Art Education Laboratory	2
Art 204—Art Education Laboratory	2
Total	20

Curriculum in Crafts

For the Degree of Bachelor of Fine Arts in Crafts

A total of 122 semester hours, plus physical education, is required for the degree.

CERAMIC EMPHASIS

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	16 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 125—Life Drawing	2	Art 126—Life Drawing	2
Art 133—Design Workshop	3	Art 134—Design Workshop	3
Art 141—Still Life	2	Art 142—Still Life	2
Art 151—Sculpture	2	Art 152—Sculpture	2
Physical Education	1	Physical Education	1
Art Elective	2	Art Elective	2

THIRD YEAR	15 HOURS		15 HOURS
Art 290—Ceramic Raw Materials	2	Art 291—Glaze Calculation	2
Art 294—Ceramic Design, I	3	Art 295—Ceramic Design, II	3
Art History	3	Home Econ. 196—Weaving	3
Social Science Sequence	3	Social Science Sequence	3
L.A.S. 141—Physical Science, I	4	L.A.S. 142—Physical Science, II	4

FOURTH YEAR	16 HOURS		16 HOURS
Art 292—Introduction to Metal Design in Jewelry	3	Art History or Architectural History	3
Art 298—Ceramic Design, III	5	Art 293—Development of Metal Design in Jewelry	3
Art Elective	2	Art 299—Ceramic Design, IV	5
Econ. 108—Elements of Economics	3	Art Elective	2
Humanities Sequence	3	Humanities Sequence	3

METAL EMPHASIS

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 125—Life Drawing	2	Art 126—Life Drawing	2
Art 133—Design Workshop	3	Art 134—Design Workshop	3
Art 141—Still Life	2	Art 142—Still Life	2
Art 151—Sculpture	2	Art 152—Sculpture	2
L.A.S. 141—Physical Science, I	4	L.A.S. 142—Physical Science, II	4
Physical Education	1	Physical Education	1
THIRD YEAR	**15 HOURS**		**16 HOURS**
Art 292—Introduction to Metal Design in Jewelry	3	Art 293—Development of Metal Design in Jewelry	3
Art Elective	2	Biol. 101—Biological Science	4
Art History	3	Home Econ. 196—Weaving	3
Biol. 100—Biological Science	4	Home. Econ. 263—Textile Design—Printing, or Art Elective	3
Social Science Sequence	3	Social Science Sequence	3
FOURTH YEAR	**14 HOURS**		**13 HOURS**
Art 294—Ceramic Design, I	3	Art History or Architectural History	2
Art 296—Decorative Metal Techniques	5	Art 295—Ceramic Design, II	3
Econ. 108—Elements of Economics	3	Art 297—Construction of Hollow and Flatware in Silversmithing	5
Humanities Sequence	3	Humanities Sequence	3

Curriculum in Graphic Design

For the Degree of Bachelor of Fine Arts in Graphic Design

A total of 122 semester hours, plus physical education, is required for the degree.

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	15 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 131—Elementary Composition	2	Art 132—Elementary Composition	2
or		or	
Art 133—Design Workshop	3	Art 133—Design Workshop	3
Art 161—Calligraphic Design	2	or	
Art Elective	4 or 3	Art 134—Design Workshop	3
Physical Education	1	Art 162—Letterform Design	2
Humanities Sequence	3	Art Elective	4 or 3
		Physical Education	1
		Humanities Sequence	3
THIRD YEAR	**16 HOURS**		**15 HOURS**
Art History	3	Art 263—Reproduction Graphics	2
Art 265—Graphic Design, I	3	Art 266—Graphic Design, II	3
Art Elective	4	Art Elective	4
Social Science Sequence	3	Social Science Sequence	3
Electives	3	Communications Elective	3

FOURTH YEAR	16 HOURS		15 HOURS
Art 264—Television Graphics	2	Art History or Architectural History	2 or 3
Art 267—Graphic Design, III	3	Art 268—Graphic Design, IV	3
Natural Science Sequence	3	Natural Science Sequence	3
Electives	8	Electives	5 or 4
		Art 269, Senior Graphic Design Project	2

Art electives must be chosen in consultation with adviser. A two-sequence course must be taken in at least two of the subject areas.

Curriculum in the History of Art

For the Degree of Bachelor of Fine Arts in the History of Art

A total of 122 semester hours, plus physical education, is required for the degree.

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	15 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art Elective (studio)[1]	2	Foreign Language	4
Foreign Language[2]	4	Hist. 112—History of Western Civilization from 1815 to the Present	4
Hist. 111—History of Western Civilization to 1815	4	Physical Education	1
Speech 101—Principles of Effective Speaking	3	Electives	3
Physical Education	1		

THIRD YEAR	15 HOURS		15 HOURS
Art History	3	Art History	3
History or English	3	Art Elective (studio)	2
Humanities 211—The Growth of American Culture	4	History or English	3
Electives	5	Humanities 212—The Growth of American Culture	4
		Phil. 101—Introduction to Philosophy	3

FOURTH YEAR	15 HOURS		15 HOURS
Art History	6	Art History	6
Art Elective (studio)	2	Art Elective (studio)	2
Phil. 323—Philosophy of Art	3	Electives	7
Electives	4		

NOTES

[1] Recommended studio courses are Art 125, 126, 131, 132, 141, 142.

[2] A reading knowledge of a modern foreign language equivalent to that resulting from four semesters of study commenced in college is required (104 level). Completion of four years of one modern language in high school also satisfies this requirement. French or German are recommended.

Curriculum in Industrial Design

For the Degree of Bachelor of Fine Arts in Industrial Design

A total of 122 semester hours, plus physical education, is required for the degree.

ART EMPHASIS

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	15 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 125—Life Drawing, I	2	Art 126—Life Drawing, II	2
Art 133—Design Workshop	3	Art 134—Design Workshop	3
L.A.S. 141—Physical Science, I	4	Art 162—Letterform Design	2
Physical Education	1	L.A.S. 142—Physical Science, II	4
Art Elective	2	Physical Education	1

THIRD YEAR

	16 HOURS		16 HOURS
Art 210—History of Furniture and Interior Design	2	Art Elective	4
Art 265—Graphic Design, I	3	Art 272—Materials and Processes	3
Art 271—Materials and Processes	3	Art 276—Industrial Design	3
Art 275—Industrial Design	3	G.E. 101—Engineering Graphical Communication	3
Art Elective	2	Econ. 255—Comparative Economic Systems	3
Econ. 108—Elements of Economics	3		

FOURTH YEAR

	14 HOURS		16 HOURS
Advanced Art History	3	Art History or Architectural History	2
Art 277—Advanced Industrial Design	5	Art 278—Advanced Industrial Design	5
Humanities Sequence	3	Humanities Sequence	3
Marketing Elective	3	M.E. 180—Engineering Materials and Processes	3
		Humanities Elective	3

STRUCTURAL EMPHASIS

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	16 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 133—Design Workshop	3	Art 134—Design Workshop	3
L.A.S. 141—Physical Science, I	4	L.A.S. 142—Physical Science, II	4
Math. 112—College Algebra	3	Math. 120—Geometry	5
Math. 114—Trigonometry	2	Physical Education	1
Physical Education	1		

THIRD YEAR	16 HOURS		18 HOURS
Art 162—Letterform Design	2	Art 265—Graphic Design, I	3
Art 210—History of Furniture and Interior Design	2	Art 272—Materials and Processes	3
Art 271—Materials and Processes	3	Art 276—Industrial Design	3
Art 275—Industrial Design	3	Econ. 108—Elements of Economics	3
Math. 131—Calculus and Geometry	3	G.E. 101—Engineering Graphical Communication	3
Humanities Sequence	3	Humanities Sequence	3

FOURTH YEAR	14 HOURS		12 HOURS
Advanced Art History	3	Art History or Architectural History	2
Art 277—Advanced Industrial Design	5	Art 278—Advanced Industrial Design	5
Economics 255—Comparative Economic Systems	3	Social Science Elective	3
C.S. 101—Introduction to Automatic Digital Computing	3	Humanities Elective	2

Curriculum in Medical Art

For the Degree of Bachelor of Science in Medical Art

(Effective as of September 1, 1967, the degree is awarded by the School of Associated Medical Sciences at the Medical Center.)

The first three years of the curriculum in medical art are given on the Urbana campus where training in studio work and science courses is obtained. The last two years, given in the College of Medicine at the Medical Center, Chicago, include medical study, techniques, and practical application. A minimum of ninety-five semester hours on the Urbana campus plus two additional years at the Medical Center are required for the degree.

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	18 HOURS
Art 125—Life Drawing, I	2	Art 126—Life Drawing, II	2
Art 129—Anatomy, I	2	Art 130—Anatomy, II	2
Art. 131—Elementary Composition	2	Art 132—Elementary Composition	2
Physiol. 103—Introduction to Human Physiology	4	Journ. 223—Photojournalism	3
Zool. 104—General Zoology	4	Physiol. 234—Human Anatomy and Physiology	5
Physical Education	1	Elective	3
		Physical Education	1

THIRD YEAR	17 HOURS		17 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 151—Sculpture	2	Art 152—Sculpture	2
Art 162—Letterform Design	2	Art 226—Intermediate Drawing, II	2
Art 225—Intermediate Drawing, I	2	Art 265—Graphic Design, I	3
Zool. 333—Vertebrate Embryology	5	Electives	7
Electives	3		

Curriculum in Painting

For the Degree of Bachelor of Fine Arts in Painting

A total of 122 semester hours, plus physical education, is required for the degree.

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	15 HOURS
Art 111—Introduction to Ancient and Medieval Art	3	Art 112—Introduction to Renaissance and Modern Art	3
Art 125—Life Drawing, I	2	Art 126—Life Drawing, II	2
Art 131—Elementary Composition	2	Art 132—Elementary Composition	2
Art 141—Still Life	2	Art 142—Still Life	2
Art Elective	2	Art Elective	2
Physical Science Sequence	3	Physical Science Sequence	3
Physical Education	1	Physical Education	1

THIRD YEAR	15 HOURS		15 HOURS
Art History	3	Art History	3
Art 225—Intermediate Drawing	2	Art 226—Intermediate Drawing	2
Art 231—Intermediate Composition	3	Art 232—Intermediate Composition	3
Art 243—Intermediate Painting	2	Art 244—Intermediate Painting	2
Art 283—Printmaking	2	Art 382—Materials and Techniques	2
Social Science Sequence	3	Social Science Sequence	3

FOURTH YEAR	16 HOURS		16 HOURS
Art 233—Advanced Composition	3	Art 234—Advanced Composition	3
Art 245—Advanced Painting and Drawing	3	Art 246—Advanced Painting and Drawing	3
Art Elective	4	Art Elective	4
Humanities Sequence	3	Humanities Sequence	3
Electives	3	Electives	3

Curriculum in Sculpture

For the Degree of Bachelor of Fine Arts in Sculpture

A total of 122 semester hours, plus physical education, is required for the degree.

FIRST YEAR

Program for Freshmen (page 332).

SECOND YEAR

FIRST SEMESTER	15 HOURS	SECOND SEMESTER	15 HOURS
Art 111—Art History	3	Art 112—Art History	3
Art 125—Life Drawing	2	Art 126—Life Drawing	2
Art 141—Still Life	2	Art 142—Still Life	2
Art 151—Sculpture	2	Art 152—Sculpture	2
Humanities Sequence	3	Art Elective	2
Physical Education	1	Humanities Sequence	3
Electives	2	Physical Education	1

THIRD YEAR	16 HOURS		16 HOURS
Art History	3	Art History	3
Art 194—Ceramics	2	Art 192—Metalwork and Jewelry	2
Art 253—Intermediate Sculpture, I	2	Art 254—Intermediate Sculpture, II	2
Art 255—Sculpture Materials and Techniques, I	3	Art 256—Sculpture Materials and Techniques, II	3
Natural Science Sequence	4	Natural Science Sequence	4
Elective (art or academic)	2	Electives	2
FOURTH YEAR	**16 HOURS**		**14 HOURS**
Art 257—Advanced Sculpture, I	2	Art 258—Advanced Sculpture, II	2
Art 259—Advanced Sculpture Materials and Techniques, III	3	Art 260—Advanced Sculpture Materials and Techniques, IV	3
Social Science Sequence	3	Social Science Sequence	3
Electives	8	Electives (art or academic)	6

Curricula in Dance

For the Degree of Bachelor of Fine Arts in Dance

A total of 130 hours, not counting the required physical education, is required for this degree. Senior students must present a satisfactory special project as part of the degree requirement.

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 HOURS
Dance 150—Orientation to Dance	2	Dance 160—Beginning Technique[1]	3
Dance 160—Beginning Technique[1]	3	Dance 163—Improvisation, II	1
Dance 162—Improvisation, I	1	Dance 169—Music Theory and Practice for Dance, II	2
Dance 168—Music Theory and Practice for Dance, I	2	Physiol. 103—Introduction to Human Physiology,[2] or Biol. 101—Biological Science, II[2]	4
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Zool. 104—Elementary Zoology,[2] or Biol. 100—Biological Science, I[2]	4	Electives	3
Physical Education	1	Physical Education	1
SECOND YEAR	**18 HOURS**		**17 HOURS**
Dance 164—Beginning Composition	2	Dance 165—Intermediate Technique[1]	3
Dance 165—Intermediate Technique[1]	3	Dance 167—Beginning Ballet, II, or Dance 267—Intermediate Ballet, II[3]	1
Dance 166—Beginning Ballet, I, or Dance 266—Intermediate Ballet, I[3]	1	Dance 264—Intermediate Composition	2
Humanities Sequence[4]	3	Humanities Sequence[4]	3
Physiol. 234—Human Anatomy and Physiology[2]	5	Social Science Sequence[4]	3
Social Science Sequence[4]	3	Electives	4
Physical Education	1	Physical Education	1
THIRD YEAR	**16 OR 17 HOURS**		**16 OR 17 HOURS**
Dance 243—Creative Dance for Children	3	Dance 244—Teaching of Dance	3
Dance 260—Advanced Technique	3	Dance 260—Advanced Technique	3
Dance 340—History of Dance, I	3	Dance 341—History of Dance, II	3
Dance 365—Advanced Composition	2	Music Literature Elective	3 or 4
Music Literature Elective	3 or 4	Electives or Professional Elective[5]	4
Electives or Professional Elective[5]	2		

FOURTH YEAR	16 OR 17 HOURS	16 OR 17 HOURS
Dance 260—Advanced Technique, I, or Dance 360—Advanced Technique, II.	3	3
Dance 346—Theory and Philosophy of Dance	3	
Dance 345—Dance Production Workshop		3
Music 304—Composition for Dance		2
Electives or Professional Elective[5]	6	4
Electives	4 or 5	4 or 5

NOTES

[1] Students are required to enroll in a technique class, Dance 160, Dance 165, Dance 260, or Dance 360 each semester in residence as placed and should achieve the level of and enroll in one semester of Dance 260 prior to graduation. Each course may be repeated up to twelve hours.
[2] Biology 100 and 101 or Zoology 104 and Physiology 103, and Physiology 234 satisfy the College of Fine and Applied Arts natural science sequence.
[3] Dance 166, 167, 266, 267 (ballet technique) may each be repeated once for credit.
[4] Humanities and Social Science Sequence: See College of Fine and Applied Arts approved sequences.
[5] Professional Electives: Dance 350, Repertory Workshop, may be repeated up to twelve hours; Dance 351, Special Problems, may be repeated up to eight hours; Dance 199, Undergraduate Open Seminar. Additional courses in ballet technique are recommended.

For the Degree of Bachelor of Arts in the Teaching of Dance

A total of 130 hours, not counting the required physical education, is required for this degree. This curriculum prepares its graduates for teaching dance in the public schools. For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Dance 160—Beginning Technique	3	Dance 160—Beginning Technique	3
Dance 162—Improvisation, I	1	Dance 163—Improvisation, II	1
Dance 168—Music Theory and Practice for Dance, I	2	Dance 169—Music Theory and Practice for Dance, II	2
Psych. 100—Introduction to Psychology	4	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Speech 101—Principles of Effective Speaking	3
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Electives	4 or 5
Physical Education	1	Physical Education	1

SECOND YEAR	17 OR 18 HOURS	16 OR 17 HOURS
Biol. 100—Biological Science,[2] or Zool. 104—Elementary Zoology	4	
Biol. 101—Biological Science,[2] or Physiol. 103—Introduction to Human Physiology		4
Dance 165—Intermediate Technique[1]	3	3
Dance 164—Beginning Composition	2	
Dance 166—Beginning Ballet, I, or Dance 266—Intermediate Ballet, I	1	
Dance 264—Intermediate Composition		2
Humanities Sequence[2]	3	3
Music Literature Electives	3 or 4	3 or 4
Physical Education	1	1

THIRD YEAR	17 HOURS	17 HOURS
Dance 243—Creative Dance for Children	3	
Dance 260—Advanced Technique, I[1]	3	3
Dance 340—History of Dance, I	3	
Dance 341—History of Dance, II		3
Dance 345—Dance Production Workshop		3
Physiology 234—Human Anatomy and Physiology[2]	5	
Pol. Sci. 150—American Government: Organization and Powers		3
Psych. 216—Child Psychology, or Psych. 217—Comparative Development, or Ed. Psych. 236—Child Development for Elementary Teachers		3
Electives or Professional Electives[3]	3	2

FOURTH YEAR	17 OR 18 HOURS		15 HOURS
Dance 260—Advanced Technique, I[1] or Dance 360—Advanced Technique, II[1]	3	Dance 245—Dance in Elementary School	2
Ed. Prac. 250—School and Community Experiences	2	Ed. Prac. 242—Educational Practice in Secondary Education	5
Hist. Phil. Ed. 201—Foundations of American Education	2	Ed. Psych. 211—Educational Psychology	3
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3	Sec. Ed. 240—Principles of Secondary Education	2
Electives	5 or 6	Sec. Ed. 241—Technic of Teaching in the Secondary School	3
Electives or Professional Electives[3]	2		

NOTES

[1] Students must enroll in a technique class, Dance 160, Dance 165, Dance 260, or Dance 360, each semester in residence as placed and should achieve the level of and enroll in one semester of Dance 260 prior to graduation. Each course may be repeated up to twelve hours.

[2] Electives must include a minimum approved sequence of six semester hours in the humanities, social sciences, and natural sciences respectively. (Political Science 150 and History 152 or 262 fulfill the social science requirement. Biology 100 and 101, Zoology 104 and Physiology 103, and Physiology 234 fulfill the natural science sequence.)

[3] Professional Electives—Recommended courses: Dance 350, Repertory Workshop, may be repeated up to twelve hours; Dance 351, Special Problems, may be repeated up to eight hours; Dance 199, Undergraduate Open Seminar; Dance 167; Dance 266; Dance 267, Ballet; Dance 346, Theory and Philosophy of Dance; Dance 365, Advanced Composition.

Teacher Education Minor in Dance

	HOURS
Dance 150—Orientation to Dance	2
Dance Technique Courses	
Dance 160, 165, 260, 360 (three courses as placed)	9
Dance 162—Improvisation, I	1
Dance 163—Improvisation, II	1
Dance 164—Beginning Composition	2
Dance 168—Music Theory and Practice for Dance, I	2
Dance 169—Music Theory and Practice for Dance, II	2
Dance 243—Creative Dance for Children	3
Dance 244—Teaching of Dance	3
Total	25

Students intending to minor in dance should elect Music 130 and 131 which will fulfill the Humanities Sequence requirement.

Curriculum in Landscape Architecture

For the Degree of Bachelor of Landscape Architecture

This curriculum requires 132 semester hours of credit for graduation, not counting physical education.

FIRST YEAR FIRST SEMESTER	17 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Arch. 171—Basic Design, I	3	Arch. 172—Basic Design, II	3
Biol. 100—Biological Science, I[1]	4	Biol. 101—Biological Science, II[1]	4
L.A. 101—Introduction to Landscape Architecture	2	L.A. 102—Site Planning	2
Speech 111—Verbal Communications	4	Math. 114—Plane Trigonometry	2
U.P. 171—Planning Cities and Regions	3	or	
Physical Education	1	Math. 104—Algebra and Trigonometry	3
		Speech 112—Verbal Communications	4
		Physical Education	1

SECOND YEAR	17 HOURS		17 HOURS
L.A. 133—Landscape Design	4	L.A. 122—Landscape Surveys	3
L.A. 141—Land Form Design	3	L.A. 134—Site Design	4
L.A. 151—Plant Materials, I	3	L.A. 152—Plant Materials, II	3
Supporting Elective[2]	3	Supporting Elective[2]	3
Elective (General Education Sequence)[1]	3	Elective (General Education Sequence)[1]	3
Physical Education	1	Physical Education	1

THIRD YEAR	16 HOURS		16 OR 17 HOURS
L.A. 181—Visual Communications	2	L.A. 182—Visual Communications	2
L.A. 200—Field Trip, I	0	L.A. 236—Urban Land Design	4
L.A. 235—Recreational Land Design	4	L.A. 244—Site Construction	3
L.A. 243—Site Engineering	3	L.A. 254—Planting Design, II	3
L.A. 253—Planting Design, I	3	Elective (General Education Sequence)[1]	4 or 5
Elective (General Education Sequence)[1]	4		

FOURTH YEAR	18 HOURS		18 HOURS
L.A. 200—Field Trip, I	0	L.A. 246—Professional Practice	3
L.A. 214—History of Landscape Architecture	3	L.A. 338—Thesis Design Project	5
L.A. 337—Regional Landscape Design	5	Supporting Electives[2]	6
Supporting Electives[2]	6	Elective	4
Elective	4		

NOTES

[1] A minimum of six credit hours of approved sequence courses is required in the Humanities, Natural Sciences, and Social Sciences, for a minimum total of eighteen credit hours of General Education courses.

[2] A minimum total of eighteen credit hours of professionally related courses selected from the following recommended list of Supporting Electives is required, with a minimum of three credit hours in each of the categories of History, Communications, Techniques, and Environment.

SUPPORTING ELECTIVES

The following are recommended related courses (including subsequent courses for which those listed below are prerequisite). A minimum of three hours are to be selected from *each* category. A minimum total of eighteen hours of Supporting Elective courses is required.

CATEGORY I—COMMUNICATION	HOURS
Adv. 309—Public Relations	3
Art 151—Sculpture	2
Art 215—Basic Photography	3
Art 265—Graphic Design	3
Art—Drawing Courses	3
Comm. 360—Educational Uses of Radio and Television	3
G.E. 304—Professional Expression	3 or 4
Journ. 233—Publication Design	2
Rhet. 133—Principles of Composition	3
Rhet. 251—Business Writing	3
Rhet. 272—Report Writing	2
R.T.V. 356—Cinematography for Television	3

CATEGORY II—HISTORY	
Anth. 220—Introduction to Prehistory	3
Anth. 260—Introduction to Ethnology	3
Arch. 211—Introduction to Ancient and Medieval Architecture	3
Arch. 212—Introduction to Renaissance and Modern Architecture	3
Art 111—Introduction to Ancient and Medieval Art	3

Art 112—Introduction to Renaissance and Modern Art	3
Art 115—Art Appreciation	3
Art 209—Japanese Arts Workshop	3
Art 211—Art of Industrialized Society	2
G.E. 220—History of Engineering	3
Geog. 374—Human Ecology	4
U.P. 351—History of Urban Planning	3

CATEGORY III–TECHNICAL

Accy. 203—Business and Accounting Methods	2
Agron. 101—Introductory Soils	4
Avi. 101—Private Pilot	3
C.E. 200—General Surveying	3
C.E. 230—Transport Engineering	3
C.E. 334—Airport Design	3
C.S. 101 or C.S. 121—Introduction to Computer Programming	3
E.E. 114—Wiring and Illumination	3
Fin. 264—Urban Real Estate	3
For. 101—General Forestry	3
G.E. 292—Engineering Law	3
Geog. 111—Introductory Meteorology	3
Geog. 201—Advanced Physical Geography	3
Geog. 373—Map Compilation and Construction	4
Geog. 378—Descriptive Interpretation of Remote Sensors	4
Geol. 101—Physical Geology	4
Geol. 301—Geomorphology	4
Hort. 230—Garden Flowers	3
Hort. 236—Turf Management	3
Hort. 251—Arboriculture	3
Pol. Sci. 350—Introduction to Law	3

CATEGORY IV–ENVIRONMENTAL

Arch. 379—Urban Housing	2
Biol. 312—Environmental Biology	3
Bot. 381—Plant Ecology	5
Bot. 485—Plant Geography	3
Geog. 214—Conservation of Natural Resources	3
Geog. 314—Regional Problems in Conservation	3
Geog. 385—Urban Geography	3
Rec. 320—Park Management	3
Rec. 395—Recreational Use of Public Lands	3
U.P. 374—Urban Planning Theory	3
U.P. 376—Planning Analysis	3
U.P. 377—Planning Procedures	3
U.P. 380—Regional Planning	3
U.P. 382—Urban Planning Language and Thought	3
U.P. 384—Urban Design and Plan Method	3

Curriculum in Music

For the Degree of Bachelor of Music

This curriculum requires 130 semester hours of credit for graduation, not counting the required physical education.

The general education sequence requirements in the humanities, social sciences, and natural sciences and electives must be met from the college elective and general education sequence list.

INSTRUMENTAL MAJOR

The instrumental major may be taken in piano, organ, harpsichord, violin, viola, violoncello, string bass, flute, clarinet, oboe, bassoon, alto saxophone, cornet or trumpet, French horn, trombone, baritone, tuba, percussion, or harp.

A student enrolled in this curriculum takes two applied subjects, one a major (thirty-two hours) and the other a minor (eight hours).

Senior students must present a satisfactory public recital as part of the requirements for the Bachelor of Music degree.

FIRST YEAR FIRST SEMESTER	15 OR 16 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Major Applied Music Subject	4	Major Applied Music Subject	4
Minor Applied Music Subject	2	Minor Applied Music Subject	4
Music 101—Theory of Music, I	3	Music 102—Theory of Music, II	3
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1
		Electives	2
SECOND YEAR	**18 HOURS**		**18 HOURS**
Major Applied Music Subject	4	Major Applied Music Subject	4
Minor Applied Music Subject	2	Minor Applied Music Subject	2
Music 103—Theory of Music, III	3	Music 104—Theory of Music, IV	3
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III	1
Music 213—History of Music, I	3	Music 214—History of Music, II	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Foreign Language	4	Foreign Language	4
Physical Education	1	Physical Education	1
THIRD YEAR	**16½ HOURS**		**16½ HOURS**
History of Music[1]	3	History of Music[1]	3
Major Applied Music Subject	4	Major Applied Music Subject	4
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 300—Eighteenth-Century Counterpoint	3	Music 301—Fugue	3
Music Ensemble	½	Music Ensemble	½
Electives	6	Electives	6
FOURTH YEAR	**16½ HOURS**		**15½ TO 17½ HOURS**
Major Applied Music Subject	4	Major Applied Music Subject	4
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 330—Applied Music Pedagogy (piano and string majors only)	2	Music 330—Applied Music Pegagogy (piano and string majors only)	2
Music Ensemble	½	Music Ensemble	½
Electives	10	Electives	9 to 11

NOTES

[1] To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

COMPOSITION MAJOR

Within this curriculum, major emphasis may be placed on the theory of music. Necessary course adjustments require approval of the theory division.

Senior students must present a satisfactory recital of original compositions as part of the requirements for the Bachelor of Music degree. If the major is theory, an advanced project determined and approved by the theory division is required.

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS	SECOND SEMESTER	15 OR 16 HOURS
Applied Music[1]	2	Applied Music	2
Music 101—Theory of Music, I	3	Music 102—Theory of Music, II	3
Music 106—Composition	2	Music 106—Composition	2
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1
Electives	3	Electives	3

SECOND YEAR

	16 HOURS		16 HOURS
Applied Music	2	Applied Music	2
Music 103—Theory of Music, III	3	Music 104—Theory of Music, IV	3
Music 106—Composition	2	Music 106—Composition	2
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III	1
Music 213—History of Music, I	3	Music 214—History of Music, II	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
French, German, or Italian	4	French, German, or Italian	4
Physical Education	1	Physical Education	1

THIRD YEAR

	17½ HOURS		17½ HOURS
Applied Music	2	Applied Music	2
History of Music[2]	3	History of Music[2]	3
Music 200—Instrumentation, I	2	Music 201—Instrumentation, II	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 300—Eighteenth-Century Counterpoint	3	Music 301—Fugue	3
Music 306—Composition	4	Music 306—Composition	4
Music Ensemble	½	Music Ensemble	½
Electives	3	Electives	3

FOURTH YEAR

	16½ TO 18½ HOURS		17½ HOURS
Applied Music	2	Applied Music	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 306—Composition	4	Music 306—Composition	4
Music 320—Proseminar	2	Music 315—Contemporary Music	2
Music Ensemble	½	Music 320—Proseminar	2
Electives	8 to 10	Music Ensemble	½
		Electives	7

NOTES

[1] Whether or not piano has been the applied music subject, the student must acquire a thorough practical knowledge of the pianoforte.

[2] To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

HISTORY OF MUSIC MAJOR

FIRST YEAR

FIRST SEMESTER	13 OR 14 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Applied Music[1]	4	Applied Music[1]	4
Music 101—Theory of Music, I	3	Music 102—Theory of Music, II	3
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1
		Electives	4

SECOND YEAR

	16 HOURS		16 HOURS
Applied Music[1]	4	Applied Music[1]	4
Music 103—Theory of Music, III	3	Music 104—Theory of Music, IV	3
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III	1
Music 213—History of Music, I	3	Music 214—History of Music, II	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
French or German[2]	4	French or German[2]	4
Physical Education	1	Physical Education	1

THIRD YEAR

	18½ HOURS		18½ HOURS
History of Music[3]	3	History of Music[3]	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 300—Eighteenth-Century Counterpoint	3	Music 301—Fugue	3
Music Ensemble	½	Music Ensemble	½
French or German[2]	4	French or German[2]	4
Literature[4]	3	Literature[4]	3
Electives (non-music)	5	Electives (non-music)	5

FOURTH YEAR

	15½ TO 17½ HOURS		16½ TO 18½ HOURS
History of Music[3]	3	History of Music[3]	3
Music 229—Thesis	2	Music 229—Thesis	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
History	3	History	3
Music Theory (306, 307, 308, 318)	2 or 3	Music Theory (306, 307, 308, 319)	2 or 3
Music Ensembles	½	Music Ensembles	½
Electives	4 to 7	Electives	5 to 8

NOTES

[1] Whether or not piano has been the applied music subject, the student must demonstrate reasonable facility in piano by the end of the sophomore year.
[2] Two years in one language are required except with special permission of adviser.
[3] To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.
[4] English 363 and 364 are recommended.

VOICE MAJOR

The major applied music subject throughout the course includes work in vocal diction as well as private lessons in voice. At least eight hours each in Italian, French, and German are required for the voice major. A student who has completed two years of high

school study in either French, German, or Italian is excused from that specific curricular requirement and allowed to substitute eight hours in electives.

Senior students must present a satisfactory public recital as part of the requirements for the Bachelor of Music degree.

FIRST YEAR

FIRST SEMESTER — 15 OR 16 HOURS		SECOND SEMESTER — 16 OR 17 HOURS	
Music 101—Theory of Music, I	3	Music 102—Theory of Music II	3
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 166—English Diction, or Music 167—Italian Diction	1	Music 166—English Diction, or Music 167—Italian Diction	1
Music 180—Piano	2	Music 180—Piano	2
Music 181—Voice	3	Music 181—Voice	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1
		Electives	2

SECOND YEAR

18 HOURS		18 HOURS	
Music 103—Theory of Music, III	3	Music 104—Theory of Music, IV	3
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III	1
Music 168—German Diction, or Music 169—French Diction	1	Music 168—German Diction, or Music 169—French Diction	1
Music 180—Piano	2	Music 180—Piano	2
Music 181—Voice	3	Music 181—Voice	3
Music 213—History of Music, I	3	Music 214—History of Music, II	3
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Foreign Language	4	Foreign Language	4
Physical Education	1	Physical Education	1

THIRD YEAR

17½ HOURS		17½ HOURS	
History of Music[1]	3	History of Music[1]	3
Music Ensemble	½	Music Ensemble	½
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 300—Eighteenth-Century Counterpoint	3	Music 301—Fugue	3
Music 366—Vocal Repertoire, I	1	Music 367—Vocal Repertoire, II	1
Music 381—Voice	3	Music 381—Voice	3
Foreign Language	4	Foreign Language	4
Electives	3	Electives	3

FOURTH YEAR

16½ HOURS		13½ TO 15½ HOURS	
Music Ensemble	½	Music Ensemble	½
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Music 330—Applied Music Pedagogy	2	Music 330—Applied Music Pedagogy	2
Music 381—Voice	3	Music 381—Voice	3
Electives	11	Electives	8 to 10

NOTES

[1] To be chosen from Music 310, 311, 312, 313, 314, 315, or 317.

Curriculum in Music Education

For the Degree of Bachelor of Science in Music Education

The minimum requirements for teaching music in the primary and secondary schools are that the teacher be sufficiently proficient on the piano to play accompaniments of music education materials and to play at sight such materials as hymns, community songs, and folk songs; and that he have a sufficient knowledge of voice to sing with a pleasant tone quality; to sing at sight, and to be able to impart the principles of voice production. Students who can not meet these requirements must take additional work in the branches of applied music in which they are deficient.

A minimum of 130 semester hours, not counting physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

VOCAL–CHORAL EMPHASIS

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	15 HOURS
Applied Music Elective[1]	2	Applied Music Elective[1]	2
Music 101—Theory of Music, I	3	Music 102—Theory of Music, II	3
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 180—Piano	2	Music 180—Piano	2
Music 181—Voice	2	Music 181—Voice	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Speech 111—Verbal Communication[2]	4	Speech 112—Verbal Communication[2]	4
Physical Education	1	Physical Education	1

SECOND YEAR	16½ HOURS		16½ HOURS
Applied Music Elective[1]	2	Applied Music Elective[1]	2
Music Ensemble[3]	½	Music Ensemble[3]	½
Music 103—Theory of Music, III	3	Music 104—Theory of Music, IV	3
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III	1
Music 180—Piano	2	Music 142—Elements of Conducting	2
Music 181—Voice	2	Music 180—Piano[4]	2
Music 269—Music Convocations and Concerts	0	Music 181—Voice[4]	2
Natural Science Sequence	3	Music 269—Music Convocations and Concerts	0
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Natural Science Sequence	3
Physical Education	1	Physical Education	1

THIRD YEAR	18½ HOURS		16½ HOURS
Music Ensemble[1]	½	Hist. 262—The United States: World Power in an Industrial Age Since 1877	3
Music 213—History of Music, I	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Music 230—Choral Literature and Conducting, I	2	Music Ensemble[1]	½
Music 242—Teaching Music in the Elementary School	3	Music 214—History of Music, II	3
Music 269—Music Convocations and Concerts	0	Music 231—Choral Literature and Conducting, II	2
Psych. 100—Introduction to Psychology	4	Music 243—Teaching Music in the Junior High School	3
Electives	6	Music 269—Music Convocations and Concerts	0
		Electives	3

FOURTH YEAR	16 OR 17 HOURS	18 OR 19 HOURS
Literature	3	
Music 245—Choral Arranging	2	
Music 269—Music Convocations and Concerts	0	
Pol. Sci. 150—American Government: Organization and Powers	3	
Speech 203—Dramatics for Teachers	3	
Electives[5]	5 or 6	
Ed. Prac. 238—Educational Practice for Special Fields in Elementary Schools.		3
Ed. Prac. 242—Educational Practice in Secondary Education		3
Ed. Psych. 211—Educational Psychology		3
Music 244—Teaching of Instrumental Music		2
Music 246—Teaching of Choral Music		2
Music 269—Music Convocations and Concerts		0
Sed. Ed. 240—Principles of Secondary Education		2
Sec. Ed. 241—Technic of Teaching in the Secondary School		3 or 4

NOTES

[1] This should be in the student's major applied subject if that subject is voice, piano, or organ.
[2] Rhetoric 101, 102, and Speech 101 or 105 or 141 may be taken instead of Speech 111 and 112.
[3] Two semesters of ensemble must be in Music 260, 261, 262, 263, or 264.
[4] Tests are given in piano and/or voice. If the student has not attained adequate proficiency, he is required to take additional hours in these courses.
[5] Electives must include approved sequences of at least six hours in humanities.

INSTRUMENTAL EMPHASIS

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	15 HOURS
Applied Major	2	Applied Major	2
Music 101—Theory of Music, I	3	Music 102—Theory of Music, II	3
Music 110—Basic Music Literature	2	Music 107—Ear Training, Sight Singing, and Keyboard Harmony, I	1
Music 180—Piano	2	Music 180—Piano	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Speech 111—Verbal Communication[1]	4	Speech 112—Verbal Communication[1]	4
Supplementary Instruments[2]	2	Supplementary Instruments[2]	2
Physical Education	1	Physical Education	1

SECOND YEAR	16½ HOURS	17½ HOURS
Applied Major	2	2
Music Ensemble[3]	½	½
Music 103—Theory of Music, III	3	
Music 104—Theory of Music, IV		3
Music 108—Ear Training, Sight Singing, and Keyboard Harmony, II	1	
Music 109—Ear Training, Sight Singing, and Keyboard Harmony, III		1
Music 180—Piano[4]	2	
Music 142—Elements of Conducting		2
Music 269—Music Convocations and Concerts	0	0
Natural Science Sequence	3	3
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	
Supplementary Instruments[2]	2	2
Physical Education	1	1
Electives[5]		3

THIRD YEAR	18½ HOURS		17½ HOURS
Applied Major	2	Applied Major	2
Music Ensemble[3]	½	Hist. Phil. Ed. 201—Foundations of American Education	2
Music 178—Class Instruction in Voice[4]	2	Music Ensemble[3]	½
Music 213—History of Music, I	3	Music 214—History of Music, II	3
Music 232—Instrumental Literature and Conducting, I	2	Music 233—Instrumental Literature and Conducting, II	2
Music 269—Music Convocations and Concerts	0	Music 269—Music Convocations and Concerts	0
Psych. 100—Introduction to Psychology	4	Supplementary Instruments[2]	2
Supplementary Instruments[2]	2	Electives[5]	6
Electives[5]	3		

FOURTH YEAR	16 OR 17 HOURS		16 OR 17 HOURS
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3	Ed. Prac. 238—Educational Practice for Special Fields in Elementary Schools	3
Literature	3	Ed. Prac. 242—Educational Practice in Secondary Education	3
Music 200—Instrumentation, I	2	Ed. Psych. 211—Educational Psychology	3
Music 269—Music Convocations and Concerts	0	Music 244—Teaching of Instrumental Music	2
Pol. Sci. 150—American Government: Organization and Powers	3	Music 269—Music Convocations and Concerts	0
Electives[5]	5 or 6	Sec. Ed. 240—Principles of Secondary Education	2
		Sec. Ed. 241—Technic of Teaching in the Secondary School	3 or 4

NOTES

[1] Rhetoric 101, 102, and Speech 101 or 105 or 141 may be taken instead of Speech 111 and 112.
[2] Four hours of winds and percussion and four hours of strings are required. The remaining four hours are assigned in strings or winds at the choice of the student and the adviser.
[3] Two semesters of ensemble must be in Music 254, 255, 256, or 257.
[4] Tests are given in piano and voice. If the student has not attained adequate proficiency, he is required to take additional work in these areas.
[5] Students are requested to take Music 346 and one additional methods course to be selected from Music 242, 243, 246. Electives must include approved sequences of at least six hours in humanities.

Teacher Education Minors in Music

INSTRUMENTAL MUSIC	HOURS
Music 100—Rudiments of Theory	2
Music 110—Basic Music Literature	2
Music 142—Elements of Conducting	2
Music 170—String Instruments	4
Music 180—Piano, or Music 183–199—Band and Orchestral Instruments (to be chosen with consent of adviser)	4
Music 244—Teaching of Instrumental Music	2
Music 171, 172, 173, 174, 175, 176—Wind instruments (two courses required)	4
Total	20

VOCAL MUSIC

	HOURS
Music 100—Rudiments of Theory	2
Music 110—Basic Music Literature	2
Music 142—Elements of Conducting	2
Music 178—Class Instruction in Voice	2
Music 180—Piano	4
Music 181—Voice	4
Music 230—Choral Literature and Conducting, I	2
Music 246—Teaching of Choral Music	2
Music Ensemble (Vocal)	1
Total	21

Curricula in Theatre

For the Degree of Bachelor of Fine Arts in Theatre

A minimum of 128 hours of credit, plus four hours of physical education, is required for the degree.

ACTING MAJOR

Speech 177, 178, and English 102 may not be presented in fulfillment of the general education requirement in humanities.

FIRST YEAR

FIRST SEMESTER	17 HOURS	SECOND SEMESTER	16 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 101—Modern Forms	4	Theatre 102—Contemporary Forms	3
Theatre 171—Speech-Fundamentals	2	Theatre 121—Scenecraft	2
Theatre 174—Movement Improvisation	2	Theatre 172—Speech-Dialogue	2
Music 100—Theory	2	Art 116—Masterpieces of Art	2
P.E.M. 116 or P.E.W. 100—Basic Movement	1	P.E.W. 104—Modern Dance	1
Rhetoric 101 or 107—Composition	3	Rhet. 102 or 108—Composition	3

SECOND YEAR	17 HOURS		17 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 103—Classical and Medieval Forms	3	Theatre 104—16th and 17th Century Forms	3
Theatre 131—Light and Sound	3	Theatre 175—Movement-Techniques	2
Theatre 141—Makeup, I	2	Humanities Sequence	3
Theatre 173—Speech-Dialects	2	Music 178—Class Instruction in Voice	2
Humanities Sequence	3	Physical Education Choice	1
P.E.M. 119 or P.E.W. 113—Fencing	1	Elective	3

THIRD YEAR	17 HOURS		17 HOURS
Theatre 105—17th and 18th Century Forms	3	Theatre 271—Acting-Studio, I	3
Theatre 142—Makeup, II	2	Theatre 281—Directing, I	3
Theatre 176—Acting-Characterization	3	Theatre 300—Practicum, II	3
Theatre 300—Practicum, II	3	Music 115—Introduction to Opera	2
Home Econ. 285—History of Costume	2	Dance 102—Beginning Modern, II	1
Dance 101—Beginning Modern, I	1	Social Science Sequence	3
Social Science Sequence	3	Elective	2

FOURTH YEAR	15 HOURS		16 HOURS
Theatre 272—Acting-Period Styles	3	Theatre 241—Costume Design	3
Theatre 280—Dramatic Writing and Structure	3	Theatre 300—Practicum, II	3
Theatre 300—Practicum, II	3	Theatre 371—Acting-Studio, II	3
Theatre 372—Acting-Theories	3	Natural Science Sequence	3
Natural Science Sequence	3	Electives	4

DIRECTING AND PLAYWRITING BASES MAJOR

The general studies requirement in humanities is fulfilled by English 101 and 103.

FIRST YEAR FIRST SEMESTER	17 HOURS	SECOND SEMESTER	16 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 101—Modern Forms	4	Theatre 102—Contemporary Forms	3
Theatre 171—Speech-Fundamentals	2	Theatre 121—Scenecraft	2
Theatre 174—Movement-Improvisation	2	Theatre 172—Speech-Dialogue	2
Music 100—Theory	2	Art 116—Masterpieces of Art	2
P.E.M. 116 or P.E.W. 100—Basic Movement	1	P.E.W. 104—Modern Dance	1
Rhet. 101 or 107—Composition	3	Rhet. 102 or 108—Composition	3

SECOND YEAR	17 HOURS		16 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 103—Classical and Medieval Forms	3	Theatre 104—16th and 17th Century Forms	3
Theatre 131—Light and Sound	3	Theatre 140—Costume Construction	2
Theatre 141—Makeup, I	2	Theatre 175—Movement-Techniques	2
Theatre 173—Speech-Dialects	2	Engl. 103—Introduction to Fiction	3
Engl. 101—Introduction to Poetry	3	Music 178—Class Instructionin Voice	2
P.E.M. 119 or P.E.W. 133—Fencing	1	Physical Education Choice	1

THIRD YEAR	16 HOURS		17 HOURS
Theatre 105—17th and 18th Century Forms	3	Theatre 280—Dramatic Writing and Structure	3
Theatre 176—Acting-Characterization	3	Theatre 281—Directing, I	3
Theatre 300—Practicum, II	3	Theatre 300—Practicum, II	3
Home Econ. 285—History of Costume	2	Music 115—Introduction to Opera	2
Social Science Sequence	3	Social Science Sequence	3
Electives	2	Electives	3

FOURTH YEAR	16 HOURS		17 HOURS
Theatre 222—Scene Design, I	3	Theatre 241—Costume Design	3
Theatre 272—Acting-Period Styles	3	Theatre 300—Practicum, II	3
Theatre 300—Practicum, II	3	Theatre 381—Directing, II	3
Natural Science Sequence	3	Natural Science Sequence	3
Electives	4	Electives	5

TECHNOLOGY AND DESIGN MAJOR

With options in scenery and in costume.

The general education requirement in humanities is fulfilled by Art 111, 112, and a 300-level art history course.

FIRST YEAR

FIRST SEMESTER	17 HOURS		17 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 101—Modern Forms	4	Theatre 102—Contemporary Forms	3
Theatre 121—Scenecraft	2	Art 118—Drawing, II	2
Art 117—Drawing, I	2	Art 120—Design, II	2
Art 119—Design, I	2	P.E.W. 104—Modern Dance	1
P.E.M. 116 or P.E.W. 100—Basic Movement	1	Rhet. 102 or 108—Composition	3
Rhet. 101 or 107—Composition	3	Electives	3

SECOND YEAR	17 HOURS		17 HOURS
Theatre 100—Practicum, I	3	Theatre 100—Practicum, I	3
Theatre 103—Classical and Medieval Forms	3	Theatre 104—16th and 17th Century Forms	3
Theatre 111—Material and Processes: Textiles	2	Theatre 112—Materials and Processes: Wood, Metal	2
Theatre 131—Light and Sound	3	Theatre 170—Fundamentals of Acting	3
Art 121—Drawing Theory	2	Art 122—Drawing Theory	2
Natural Science Sequence	3	Natural Science Sequence	3
P.E.M. 119 or P.E.W. 133—Fencing	1	Physical Education Choice	1

THIRD YEAR	16 HOURS		16 HOURS
Theatre 105—17th and 18th Century Forms	3	Theatre 113—Materials and Processes: Paper, Plastics	2
Theatre 220—Advanced Scenecraft[1]	2	Theatre 140—Costume Construction	2
Theatre 300—Practicum, II	3	Theatre 141—Makeup, I[2]	2
Art 111—Introduction to Ancient and Medieval Art	3	Theatre 300—Practicum, II	3
Art 201—Watercolor, I	2	Art 112—Introduction to Renaissance and Modern Art	3
Home Economics 285—History of Costume[2]	2	Social Science Sequence	3
Social Science Sequence	3	Elective[2]	1
		Elective[1]	3

FOURTH YEAR	16 HOURS		16 HOURS
Theatre 222—Scene Design, I	3	Theatre 221—Advanced Scenery Painting[1]	2
Theatre 272—Acting-Period Styles[2]	3	Theatre 231—Lighting Design	3
Theatre 281—Directing, I	3	Theatre 241—Costume Design	3
Theatre 300—Practicum, II	3	Theatre 242—Costume Accessories[2]	2
Theatre 330—Photo-projection Techniques[1]	2	Theatre 300—Practicum, II	3
Art 3—History Choice	3	Theatre 310—Theatre Planning and Programming[1]	2
Elective[2]	1	Theatre 320—Scene Design, II[1]	3
Elective[1]	2	Electives[2]	5

NOTES

[1] Scenery option.
[2] Costume option.

Curriculum in Urban and Regional Planning

For the Degree of Bachelor of Urban Planning

For the degree of Bachelor of Urban Planning, 132 semester hours plus physical education are required.

The following requirements are effective for students entering after February 1, 1971.

GENERAL REQUIREMENTS (30 to 35 hours)	HOURS
Econ. 108—Elements of Economics	3
Rhet. 101 and 102—Rhetoric and Composition	6
Introduction to Sociology	3
One approved sequence of six hours in each of these areas: humanities, biological or physical sciences, and social sciences	18
Algebra and trigonometry, or exemption by acceptable scores on the University of Illinois Mathematics Placement Test	

GRAPHICS AND QUANTITATIVE METHODS (A minimum of 13 hours)	
Basic Design and Graphics: At least three courses in basic design and graphics or survey techniques such as Architecture 171, 172, Art 119, 120, 185, 186, 263, Geography 373, Landscape Architecture 122	7 to 10
Statistical Analysis: Sociology, mathematics, computer science, economics, or other courses in statistics	6

URBAN STUDIES (A minimum of 17 hours)	
Arch. 379—Urban Housing	2
Fin. 364—Fundamentals of Real Estate and Urban Economics	3
Geog. 383—Urban Geography	3
Urban Sociology or equivalent	3
At least six hours in political science	6
Additional urban studies—see electives	

URBAN PLANNING (A minimum of 40 hours)	
U.P. 171—Planning of Cities and Regions	3
U.P. 236, 337, and 338—Urban Planning Studio I, II, and III	17
U.P. 260—Special Problems—see electives	3
U.P. 351—History of Urban Planning or History of Architecture Course	3
U.P. 374—Urban Planning Theory	3
U.P. 376—Planning Analysis	4
U.P. 377—Comprehensive Planning Procedure	4
U.P. 378—Planning Legislation and Administration	3
U.P. 380—Survey of Regional Planning	3
U.P. 382—Language and Thought of Urban Planning	3

ELECTIVES (27 to 32 hours)

Professional Electives: A minimum of three hours, maximum of eleven hours, in the field of urban studies, as approved by departmental adviser.
Other Electives: to be chosen from the approved college list.

University of Illinois Bands

The University Bands are organized into the Concert Band, the First Regimental Band, and the Second Regimental Band. Membership in these organizations is determined by audition, and assignments are made according to proficiency and instrumentation. Members of the Concert Band in their third and succeeding years are eligible for scholarships amounting to approximately one-half the tuition fees for Illinois residents.

The Bands play numerous concerts on the campus, and the Concert Band also appears in many Illinois and other midwestern cities. In addition, the Bands furnish music for commencement, convocations, atheletic events, military ceremonies, and other occasions.

The University owns a large library of band music and was bequeathed

the John Philip Sousa Memorial Library. These collections comprise one of the largest and finest libraries of band music in the world.

The Concert Band maintains a complete symphonic instrumentation for the study and performance of all types of band literature and is open to those who have attained a high level of musical and technical proficiency on their instruments. The First Regimental Band maintains the instrumentation of the standard band and serves as a training organization for the Concert Band. The Second Regimental Band enrolls those who do not at first qualify for positions in the other bands, until they become eligible for promotion as improvement is shown and vacancies occur. Membership in all bands is open to women students as well as men.

One-half hour of credit per semester is offered in Bands. This credit may be used as partial fulfillment of the School of Music ensemble requirement and is available to other colleges as elective credit.

English Building.

College of Liberal Arts and Sciences

The College of Liberal Arts and Sciences is the third oldest college on the Urbana-Champaign campus; it is also the largest college and serves a diverse group of undergraduate students. It offers a wide variety of majors in the academic disciplines as well as balanced programs providing opportunities for integrated study in related disciplines. It prepares students for many kinds of professional and graduate study; it cooperates with other colleges in offering joint professional and preprofessional studies.

The principal aim of the college is, however, to provide diverse opportunities for meaningful liberal education. This concept underlies most of the requirements and curricula of the college. Students are expected to become fluent in their own language and literate in at least one foreign language, and to give attention to both the physical and biological sciences, to the social sciences, and to the humanities, regardless of their professional interests. It is hoped that such liberal studies will enlarge and augment the student's particular concerns in order to produce the resourceful and thinking graduate who had understanding of himself and of the past.

SCIENCES AND LETTERS CURRICULUM

The sciences and letters curriculum (page 363) requires a nucleus of courses in biological sciences, humanities, physical sciences, and social sciences; a reading knowledge of at least one foreign language; and a concentration in the subjects chosen as majors and minors. Students in this curriculum are encouraged to develop interests and talents supplementing their major subjects and to take courses with cultural values, such as art, literature and music.

All students planning for more advanced study after graduation are encouraged to arrange their programs with reference to the requirements for admission to the Graduate College.

Within the sciences and letters curriculum a student may specialize in courses which prepare him for the following professional schools: Communications, Law, and Medicine. There are also preprofessional programs provided within the college for students who plan to meet the minimum admission requirements for certain professional schools (see page 378 under Preprofessional Programs).

GENERAL CURRICULUM

The General Curriculum (32–10) is open to those students who have not yet decided upon a major field of study. Entering freshmen and those continuing students with

fewer than forty-five semester hours of study may elect the General Curriculum and may remain until they complete fifty-six academic hours. At that point, unless they have received special permission to stay an additional semester, they must declare a major. All college policies and regulations apply to General Curriculum students just as they would to any other student in the College of Liberal Arts and Sciences, but the General Curriculum student has available to him intensive academic advising and general counseling which is intended to help him decide upon an undergraduate area of academic specialization.

Consequently, the General Curriculum Center serves as both a college office and an advising center for any freshman or qualified sophomore student in the College of Liberal Arts and Sciences who wishes to explore various undergraduate fields while satisfying college and University requirements. Individual advising, group orientation sessions, and printed material (in the form of brochures and pamphlets) describing undergraduate majors and careers are some of the resources made available to all students in this curriculum.

SPECIALIZED PROGRAMS

Chemistry and Chemical Engineering. These curricula offer more specialized training than the chemistry major in the sciences and letters curriculum. For details of these curricula, see page 366.

Combined Engineering-Liberal Arts and Sciences Program. Completion of this five-year program of study permits a student to earn a Bachelor of Science degree in some branch of engineering from the College of Engineering and a Bachelor of Arts or a Bachelor of Science degree from the College of Liberal Arts and Sciences. For a detailed description of this program, see page 293.

Cooperative Interdepartmental Majors and Minors. Cooperative interdepartmental majors and minors are offered in the following areas: American Civilization (page 374), Asian Studies (page 375), Latin American Studies (page 376), Medieval Civilization (page 376), Religious Studies (page 377), Russian Language and Area Studies (page 377), Social Welfare (pages 377 and 378).

Geology. This curriculum offers more specialized training than the geology major in the sciences and letters curriculum. For a detailed description of the program, see page 369.

Home Economics. Students in the sciences and letters curriculum may major in home economics. For a detailed description of this program, see page 370.

Physics. This curriculum offers more specialized training than the physics major in the sciences and letters curriculum and is recommended to students who are preparing for a career in physics. For a detailed description of this curriculum, see page 371.

Speech and Hearing Science. For a detailed description of this program, see page 373.

Study Abroad. Independent study overseas is available to undergraduate students through Liberal Arts and Sciences 299. (See page 83 for further details.)

Teacher Education. Prospective teachers who are registered in the College of Liberal Arts and Sciences should register in one of the teacher education curricula and indicate their choice of teaching fields. Satisfactory completion of one of these curricula meets in full the course requirements of the state law for certification of teachers. (See pages 384 to 413.)

Theatre Art. This curriculum offers more specialized training than the speech major in the sciences and letters curriculum. For a detailed description of this curriculum, see page 352.

PREPROFESSIONAL PROGRAMS

Medical Record Administration. A three-year preprofessional program in the College of Liberal Arts and Sciences leading to a fourth year at the College of Medicine and a Bachelor of Science degree granted by the College of Medicine. For a detailed description of this program, see page 379.

Medical Technology. A three-year preprofessional program in the College of Liberal Arts and Sciences leading to a fourth year at the College of Medicine and a Bachelor of

Science degree granted by the College of Medicine. For a detailed description of this program, see page 379.

Occupational Therapy. This program consists of six semesters of study in the College of Liberal Arts and Sciences on the Urbana campus and five quarters at the College of Medicine on the Chicago campus. Upon satisfactory completion of the work in this program, the student is eligible for the degree of Bachelor of Science in Occupational Therapy from the College of Medicine. For a detailed description of this program, see page 380.

Precommunications. Requirements for admission in the College of Communications are listed on page 244. These requirements may be satisfied by the basic requirements of the sciences and letters curriculum.

Predentistry. The two-year predentistry program, which includes the minimum requirements for admission to the College of Dentistry, is outlined on page 378.

Prelaw. The minimum requirements for admission to the College of Law are outlined on page 58. A statement of general interest to students preparing for law school is presented on page 381.

Premedicine. The minimum requirements for admission to the College of Medicine are outlined on page 62. The requirements for the combined Liberal Arts and Sciences—Medicine degree are described on page 381.

Prenursing. The program is a one-year program designed to prepare students for admission to the degree program in nursing at the College of Nursing in Chicago. For a detailed description of this program, see page 382.

Prepharmacy. A one-year program that indicates how students in the sciences and letters curriculum can meet requirements for admission to the College of Pharmacy in Chicago. (See page 382.)

Preveterinary. The two-year preveterinary program, which includes the minimum requirements for admission to the College of Veterinary Medicine, is outlined on page 383.

DEPARTMENTS AND DIVISIONS

To correlate the work of the departments in the College of Liberal Arts and Sciences, the following groups are organized:

1. The School of Life Sciences, consisting of Botany, Entomology, Microbiology, Physiology and Biophysics, and Zoology.
2. The Division of Humanities, consisting of the Classics, English (including rhetoric), French, Germanic Languages and Literatures (including German and Scandinavian), History, Philosophy, Slavic Languages and Literatures (including Polish, Russian, Serbo-Croatian, and Ukrainian), Spanish, Italian, and Portuguese, and Speech.
3. The Division of Social Sciences, consisting of Anthropology, Economics (a department in the College of Commerce and Business Administration), Geography, History, Linguistics, Philosophy, Political Science, Psychology, Sociology, and Speech.
4. The departments of the physical sciences are Astronomy, Chemistry and Chemical Engineering, Geology, and Mathematics.

Graduate as well as undergraduate work is conducted in all departments of this college, and courses in all these departments are taken by students enrolled in other colleges and schools of the University. The work of the faculty of this college thus serves all curricula that include the humanities, natural sciences, and social sciences.

HONORS AT GRADUATION

Honors are awarded at graduation to students in recognition of the superior quality of their work.

The college offers two types of recognition: General College Honors and Departmental Distinction, described below.

General College Honors. To be eligible for College Honors a student must meet the following general conditions:

1. He must meet University residence requirements.
2. He must meet the college requirements for graduation.

3. Normally he must have carried at least twelve semester hours of academic work (exclusive of military training and physical education) each semester.

4. He must have attained at least a 4.25 average in all courses counted toward graduation. A transfer student must attain at least a 4.25 average in all courses completed at the University of Illinois which are counted toward graduation from this college.

College Honors are recommended by the dean of the college on the basis of scholastic average, without regard to the major field. For College Honors, the notation on the diploma reads: Honors (or High Honors) in Liberal Arts and Sciences.

1. *Honors:* A student who meets college requirements and whose average in all courses taken and countable toward his degree is 4.25 or better will be awarded Honors.

2. *High Honors:* A student who qualifies for Honors and has been during a majority of his semesters in residence, including at least two of his final three semesters, either an Edmund J. James Scholar or a member of a recognized departmental honors program will be awarded High Honors.

Departmental Distinction. Any student who has shown exceptional competence in one or more areas of study may be awarded Distinction in the area(s) by his department or curriculum. Criteria for awarding Distinction are established by the department or curriculum concerned. A student enrolled in an interdepartmental curriculum may be recommended for Distinction by those responsible for the administration of that curriculum in general conformity with the conditions for Departmental Distinction. A student enrolled in a teacher-training curriculum should consult requirements described under the separate heading below.

In addition to meeting the scholastic requirements and the minimum requirements for his major, a student graduating with Departmental Distinction must, at the discretion of the major department, comply with at least one of the following requirements:

1. He must present an acceptable thesis.

2. He must pass a comprehensive examination prepared by the major department or other competent body.

3. He must pursue a special course of study, of at least four semester hours, approved by the major department. This special course of study is over and above the minimum number of hours required for the major.

The student interested in graduating with Distinction should consult with his major adviser concerning which of these alternatives is desirable.

Candidates for the degree with Distinction must register their candidacy with their adviser, preferably not later than the beginning of the junior year. Each area of specialization transmits to the Honors Council of the college, not later than the third week of each semester, the current list of students who have been accepted as candidates for the degree with Distinction.

The degree with Distinction, High Distinction, or Highest Distinction is recommended by the major department on the basis of the quality of the work done. For High or Highest Distinction, the thesis, comprehensive examination, or special course of study must give evidence of exceptional ability. Students may obtain information in requirements from the departmental and curriculum advisers.

For Departmental Distinction, the notation on the diploma reads: Distinction (or High Distinction or Highest Distinction) in . . . . Such citations are recommended by the head of the major department or by the adviser in specialized curricula and are subject to the approval of the dean of the college.

Distinction in Teacher Education Curricula. A student who has completed a curriculum in teacher education may be recommended for Distinction in the teaching of his area of specialization if he has shown superior ability in that area.

The degree with Distinction, High Distinction, or Highest Distinction is awarded on the basis of the general scholastic average and of the average of courses in his area of specialization, on the recommendation of the area of specialization committee, and on any additional requirements imposed by that committee. For High and Highest Distinction, the candidate should give evidence of exceptional ability in his course in practice teaching. Information on requirements may be obtained from the adviser in the area of specialization.

For Distinction in teacher education, the notation on the diploma reads: Distinction (or High Distinction or Highest Distinction) in the teacher education curriculum. Such citations are recommended by the chairman of the area of specialization committee and are subject to the approval of the dean of the college.

PHI BETA KAPPA

Phi Beta Kappa, the oldest national honorary fraternity, stands for high scholarship in the liberal arts. Students are eligible for membership who have a high grade-point average (4.5 or above) and who have taken at least three-quarters of their credits in courses in the College of Liberal Arts and Sciences, including the satisfaction of the college foreign language requirement and eight hours in each of the following areas: humanities, social studies, and science (four hours must be taken in a laboratory science). At least four of the eight hours in each area must be completed with a grade other than pass/fail. Students are normally elected to membership in their senior year, but graduates of the preceding semester and second-semester juniors with a very high average may be chosen. Transfer students may become eligible in the second semester of their senior year if they have completed three semesters in residence (totaling at least forty-five semester hours) at the University of Illinois.

Elections to Phi Beta Kappa are made in accordance with its own rules. The University assumes no responsibility for elections.

Curriculum in Sciences and Letters

For the Degree of Bachelor of Arts or Bachelor of Science

This curriculum leads to the degree of Bachelor of Arts and Bachelor of Science. Majors in the physical sciences (which include mathematics), the biological sciences, home economics, psychology, and social welfare may receive the degree of Bachelor of Science. The degree desired must be indicated on the degree card at the time of registration for the last semester of work.

REQUIREMENTS FOR GRADUATION

Although each student has a faculty adviser, the student is responsible for meeting the requirements for graduation. Therefore, each student should familiarize himself with the requirements listed below and should refer to them each time he plans his program.

A total of 120 semester hours, excluding basic physical education and military training, is required for graduation. A student must spend either the first three years, earning not less than ninety semester hours, or the last year, earning not less than thirty semester hours, in residence on the Urbana campus. The hours must be applicable toward the degree sought. For complete information about other requirements, see the pages indicated below.

Advanced Courses—page 366
Electives—page 366
Foreign Languages—see below
General Education Sequences—page 364
Grade-point Average—page 151
Major—page 365
Minor—page 365
Physical Education—page 152
Residence—page 151
Rhetoric—page 152

FOREIGN LANGUAGE REQUIREMENTS

A knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. Completion of four years of the same foreign language in high school also satisfies this requirement. Or if a student has passed three semesters of a foreign language at the college level or three years in high school, he may complete the requirement by passing three semesters of a second foreign language. Proficiency examinations are offered in those languages which are included in the curricula of the College of Liberal Arts and Sciences. Students transferring from other colleges may present in satisfaction of the language requirement two years of college credit in a language not offered at the University of Illinois.

No credit toward graduation is given for a beginning course in a foreign language unless it is continued through a full year. Students planning to enter the Graduate College are advised to consult their major department or the graduate school at which they plan to matriculate regarding applicable language requirements.

GENERAL EDUCATION SEQUENCES

Students who enter the sciences and letters curriculum (or who enter other schools and subsequently transfer to the college) are required to complete at least one approved sequence in each of these areas: biological science, humanities, physical science, and social science.

The student may spread courses taken to meet the requirement in general education over three or four years; indeed, he should be encouraged to think of his program in general education as a continuum, not as a set of discrete and arbitrary obstacles. Realistically, however, a student would be wise to take one sequence a year to avoid the problem of having to fill in courses during his senior year when he is likely to be occupied with more specialized objectives.

The following regulations apply to the foregoing sequences:

1. A student need not satisfy a sequence in the area in which his major department in classified (page 361), and a student may not use any courses from the department in which he majors to satisfy the general education requirement in another area. Consequently, a freshman should enroll in a sequence which does not duplicate his intended major.
2. A student may not use more than one sequence from any one department to satisfy the general education requirements.
3. Any student who has completed the six courses prescribed by the Division of General Studies has satisfied all the general education sequence requirements in the sciences and letters curriculum.
4. Some of the sequences are at the advanced level and require at least junior standing. Such courses count toward advanced hours required for graduation.
5. Insofar as possible, the sequences should be chosen from courses approved by the college. Authority for substitutions in the sequence requirements must be obtained from one of the deans.
6. An honors student with appropriate experience in one of the four areas may, with the approval of his adviser, substitute work at the 200 or 300 level for work at the 100 level. A student wishing to make such a substitution should consult his adviser concerning the conditions applicable.

The following sequences have been approved:

BIOLOGICAL SCIENCE

Biology 100, 101
Physiology 103 or 203
and Psychology 103
Any eight hours of courses offered by the School of Life Sciences; the following are recommended:
Botany 100 or 101
Entomology 103
Microbiology 100 and 101
Physiology 103 or 203
Zoology 104

HUMANITIES

A six-hour sequence in one foreign literature at the 200- and 300-level but not language courses
Art 111, 112, plus either a 300 course in history of art or Philosophy 323
Classical Civilization 110, 111, and 112
Classical Civilization 301, 302
English 101, 102, 103
English 115, 116, and either 131 or an advanced course involving the study of literature in depth (English 255, 256, 257, 258, 370, 387, and 388 are excluded.)
English 195, 196
English 251, 252, 253, 287 (any two of these four courses)
English 338, 339, 340 (any two of these three courses)
French 255, 256
History 131, 132
History 171, 172 (formerly 191, 192)
History 247, 248
History 323, 324
Humanities 151, 152
Humanities 201, 202
Humanities 211, 212
Humanities 215, 216
Humanities 363, 364
Music 130, 131
Music 130, 316, 317
Philosophy 101, 102, and 105
Philosophy 101 (or 195) and any two 300-level courses except Philosophy 333, 334, 353, 354, and 355
Philosophy 303, 306
Russian 114, 115, 116 (any two of these three courses)
Speech 177, 178

PHYSICAL SCIENCE

Astronomy 101, 102
Chemistry, any eight hours
Geography 102, 103
Geology 101, 102

Liberal Arts and Sciences 141, 142
Mathematics 118, 119; or any other eight-hour sequence excluding 101 or 118
Mathematics 124, 134
Physics, any eight hours

SOCIAL SCIENCE

Anthropology 101 and any one of the following courses: Anthropology 173, 174, 220, 230, 240, 260, 280, or 300
Economics 108 and any one of the following courses: Economics 214, 240, 255, 288, 328, 350
Geography 104, 105
History 111, 112
History 151, 152
History 171, 172 (formerly 191, 192)
History 247, 248
History 260, 261, 262
Philosophy 103, 104
Political Science 150, Anthropology 174
Political Science 184, 191
Political Science 191, 192
Psychology 100, or 105 and any one of the following courses: Psychology 201, 216, 248, 250
Sociology 100 and any one of the following courses: Sociology 212, 218, 223, or Anthropology 174
Sociology 151, 152 (or 275)

MAJORS AND MINORS

Major Subjects. Each student before beginning the junior year selects one subject and declares it to be his major. In order to be acceptable for graduation, a major must consist of at least twenty hours in courses chosen from those designated by a department and approved by the faculty of the college. Such courses must be inclusive of some distinctly advanced work and exclusive of courses open to freshmen. Normally, a student in the College of Liberal Arts and Sciences is expected to complete at least nine advanced hours of his major in residence at the University of Illinois in Urbana. Individual departments may designate certain courses which they require among these nine hours, or which they exclude.

Courses from other colleges may be counted toward a major provided that they have been formally approved and are listed in the departmental statement of the major requirements.

The subjects recognized as majors by this college are actuarial science (mathematics), anthropology, astronomy, biology, botany, chemistry, economics, English, entomology, finance, French, geography, geology, German, Greek, history, history of art, home economics, Italian, Latin, mathematics, mathematics and computer science, microbiology, music, philosophy, physics, physiology, political science, Portuguese, psychology, rhetoric and composition, Russian, sociology, Spanish, speech, statistics (mathematics), zoology. A statement of the requirements for each major may be found under the appropriate department in the *Undergraduate Courses* catalog.

Minor Subjects. Each candidate for graduation must offer, in addition to his major, a minor consisting of twenty hours in one or two subjects designated by the department in which he is taking his major and approved by the faculty, with at least eight hours in each subject if two are chosen.

Normally, a student must take at least six hours in his minor field or fields in residence at the University of Illinois in Urbana.

In exceptional cases and with prior approval of the major department, individual students may petition for exceptions to these minimum major and minor residence requirements.

Courses outside the college may be used toward a minor provided:

1. That they have been approved by the major department and are listed in its statement of approved minors; or
2. That they have been approved in writing by the executive officer of the major department to be used as a special minor.

Topical Minor. Instead of a regular minor, a student may elect an interdisciplinary topical minor, which will consist of a minimum of twenty hours in a variety of subjects drawn from three or major departments. This topical minor will enable a student to gain an understanding of some area of knowledge that crosses departmental lines. It may include courses both within and outside the college. However, no more than eight hours in 100-level courses may count toward satisfying these requirements. Whatever courses a student selects for his topical minor, he must have approval from his major department.

Interdepartmental Majors and Minors. The curricula in American civilization, medieval civilization, and Russian language and area studies may be used as majors or as

minors with majors in certain departments. The curricula in Asian studies and Latin American studies may be used as minors with majors in certain departments. The details of these curricula and the departments with which they may be used as majors or as minors are shown on pages 374 to 376.

ADVANCED COURSES

At least thirty hours must be earned before graduation in courses numbered 200 or above.

ELECTIVES

Liberal Arts and Sciences. Any course offered in the College of Liberal Arts and Sciences may be used as a free elective.

Other Colleges. A student may count toward graduation a maximum of twenty-four hours of elective courses in other colleges and schools of the University, in addition to courses acceptable for his major, minor, and general education requirements.

Graduate Courses. A student of excellent standing who is within ten semester hours of his bachelor's degree may be given the privilege of electing courses in the Graduate College with the consent of the dean of that college.

SPECIALIZED PROGRAMS

Biochemistry

Students interested in biochemistry should initially select courses suitable for the chemistry curriculum or the chemistry major of the sciences and letters curriculum. Biochemistry students are encouraged to seek the advice of biochemistry staff members.

Curricula in Chemical Engineering and Chemistry

The following curricula in chemistry and chemical engineering afford more specialized training than is required of students who make chemistry their major subject in the sciences and letters curriculum in liberal arts and sciences. However, the chemistry major also can be used by a student planning to follow a career in chemistry. Requirements for the chemistry major are described in the *Undergraduate Courses* catalog.

Students in the curricula of chemistry or chemical engineering must have at least a 3.5 general average, exclusive of the basic courses in military training and the required work in physical education, in order to be accepted by the department as juniors or seniors. A transfer student to be accepted must have a corresponding record in the institution or institutions from which he transfers and must maintain a similar average at the University of Illinois.

Curriculum in Chemistry

For the Degree of Bachelor of Science in Chemistry

A total of 130 hours of credit, not counting the first two years of military training and physical education, as outlined below, is required for graduation.

FIRST YEAR FIRST SEMESTER	17 HOURS	SECOND SEMESTER	17 HOURS
Chem. 107—General Chemistry[1]	5	Chem. 108—General Chemistry	5
Math. 120—Calculus and Analytic Geometry[2]	5	Math. 130—Calculus and Analytic Geometry	5
Rhet. 101—Rhetoric and Composition	3	Physics 106—General Physics (Mechanics)[2]	4
Electives[2,3,4]	4	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1
SECOND YEAR	**16 HOURS**		**16 HOURS**
Chem. 136—Organic Chemistry	3	Chem. 336—Organic Chemistry	3
Chem. 181—Structure and Synthesis	2	Chem. 342—Physical Chemistry	3
Language[3]	4	Chem. 383—Dynamics and Structure	2
Math. 140—Calculus and Analytic Geometry	3	Language[3]	4
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physical Education	1	Physical Education	1
THIRD YEAR	**16 HOURS**		**16 HOURS**
Chem. 315—Inorganic Chemistry	3	Electives[4]	16
Chem. 344—Physical Chemistry	3		
Chem. 385—Chemical Fundamentals	4		
Electives[4]	6		
FOURTH YEAR	**16 HOURS**		**16 HOURS**
Electives[4]	16	Electives[4]	16

NOTES

[1] For students without entrance credit in chemistry or those changing their program to the curriculum in chemistry in the first year, consultation with a Chemistry Division adviser is essential.

[2] Students who do not take Mathematics 120 or a more advanced mathematics course in the first semester must take a foreign language (usually German) in place of electives in the first semester and in place of Physics 106 in the second semester. Students who do take Mathematics 120 the first semester are urged to consider electives from the humanities or social sciences to help meet the University requirement in General Education (page 154).

[3] The minimum language requirement in the chemistry curriculum is the equivalent of two years of college work in German, or of one year of college work in German and one year in Russian. When a student does not offer work in either of these two languages for entrance, the required second year of language is to be taken as early as possible in place of the equivalent number of elective hours.

[4] Specific requirements, with regard to the electives, are as follows: (a) ten hours from 300-level courses in chemistry in addition to those specifically required above; at least four semester hours of the ten shall be laboratory work or at least two shall be laboratory work and the student shall take Chemistry 290; (b) twelve additional hours of electives chosen from Chemistry 199 (three hours maximum), Chemistry 290, any 300-level courses in chemistry, any 200- or 300-level courses in physics, Computer Science 101, any 300-level courses in mathematics, Biology 151, and 200- or 300-level courses in the biological sciences having previous biology as prerequisites; (c) six semester hours of humanities and six semester hours of social sciences to meet the University requirements in General Education (page 154).

Curriculum in Chemical Engineering

For the Degree of Bachelor of Science in Chemical Engineering

A total of 130 hours of credit, exclusive of basic physical education and military training, is required for graduation as shown below.

The chemical engineering curriculum is arranged in quite a flexible manner to

permit students to use their elective hours to arrange programs incorporating various specific areas of chemical engineering or interdisciplinary areas. For example, sequences can be set up in conjunction with the student's adviser to emphasize environmental engineering, basic physical sciences, biochemical engineering, engineering practice, or many other options. It will be advantageous to students to plan their course sequences with an adviser as early in their academic careers as possible.

Students entering without adequate preparation in mathematics, chemistry, and language may find it difficult to complete the chemical engineering curriculum in four years. Students should note that they must have at least a 3.5 college grade-point average to register in the junior- and senior-level courses (see page 366). A typical program, including all required courses and electives, is shown below. Individual students may vary the order in which the various courses are taken to suit their individual needs. However, care must be exercised in scheduling to insure that necessary course prerequisites are met.

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 HOURS
Chem. 107—General Chemistry	5	Chem. 108—General Chemistry and Qualitative Analysis	5
Math. 120—Calculus and Analytic Geometry	5	Math. 130—Calculus and Analytic Geometry	5
Rhet. 101—Rhetoric and Composition	3	Physics 106—General Physics (Mechanics)	4
Electives[1]	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1
SECOND YEAR	**16 HOURS**		**17 HOURS**
Chem. 136—Organic Chemistry	3	Ch. E. 261—Introduction to Chemical Engineering	3
Chem. 181—Structure and Synthesis	2	Chem. 336—Organic Chemistry[3]	3
Foreign Language[2]	4	C.S. 101—Introduction to Automatic Digital Computing	3
Math. 140—Calculus and Analytic Geometry	3	Foreign Language[2]	4
Physics 107—General Physics (Heat, Electricity, and Magnetism)	4	Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4
Physical Education	1	Physical Education	1
THIRD YEAR	**16 HOURS**		**16 HOURS**
Ch. E. 370—Chemical Engineering Thermodynamics	3	Ch. E. 371—Fluid Mechanics and Heat Transfer	4
Chem. 342—Physical Chemistry	3	Chem. 344—Physical Chemistry	3
Chem. 383—Dynamics and Structure	2	Chem. 385—Chemical Fundamentals	4
Math. 345—Differential Equations and Orthogonal Functions	3	Electives[1,4]	5
Electives[1,4]	5		
FOURTH YEAR	**16 HOURS**		**16 HOURS**
Ch. E. 373—Mass Transfer Operations	3	Ch. E. 379—Chemical Engineering Projects	2
Ch. E. 374—Chemical Engineering Laboratory	3	Ch. E. 381—Chemical Reaction Engineering	2
Ch. E. 377—Dynamics and Control of Chemical Systems	3	Electives[1,4]	12
Electives[1,4]	7		

NOTES

[1] Students must complete at least one social science sequence of a minimum of six semester hours and one humanities sequence of a minimum of six semester hours.

[2] Two years of one foreign language are required for the Bachelor of Science degree. Two units of high school credit in one foreign language are equivalent to one year of college credit. Students who take all four semesters of foreign language in college may satisfy the humanities elective by

taking eight hours of the intermediate foreign language (103–104), plus at least three additional hours.

[3] Biochemistry 350 may be substituted for Chemistry 336.

[4] Students must take at least fourteen hours of technical electives in fields such as chemical engineering, chemistry, biochemistry, physics, mathematics, or engineering. These must include at least two hours of chemical engineering electives, plus at least six additional hours of 300-level electives (or Chemical Engineering 290).

Curriculum in Geology

For the Degree of Bachelor of Science in Geology

The curriculum in geology is recommended for students who plan to enter graduate study in geology and become professional geologists. It offers more training in geology and basic science than is required of students who make geology their major subject in the sciences and letters curriculum in liberal arts and sciences. Requirements for the geology major are described in the *Undergraduate Courses* catalog.

To enroll in the geology curriculum, an entering freshman must rank in the upper half of his high school class. After the second year, students in the curriculum must have and maintain at least a 3.5 general average, exclusive of the required work in physical education. A transfer student to be accepted must have a corresponding record in the institution or institutions from which he transfers and must maintain a similar average at the University of Illinois.

Students who maintain a minimum grade-point average of 4.5 in all geology courses and 4.0 in all other science and mathematics courses, and who complete an acceptable bachelor's thesis based on undergraduate research, are recommended for graduation with departmental distinction.

A total of 130 hours of credit, including eight hours of summer field geology and other courses listed below, but not counting the first two years of physical education, is required for graduation.

FIRST YEAR

FIRST SEMESTER	17 OR 18 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Chem. 101—General Chemistry, or Chem. 107—General Chemistry	4 or 5	Chem. 102—General Chemistry or Chem. 108—General Chemistry	4 or 5
Geol. 101—Physical Geology	4	Geol. 102—Historical Geology	4
Math. 120—Calculus and Analytic Geometry[1]	5	Math. 130—Calculus and Analytic Geometry	5
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1

SUMMER

Geol. 215—Field Geology	8

SECOND YEAR	16 HOURS		17 HOURS
Biological Science[3]	4	Biological Science[3]	4
Geol. 331—Mineralogy	4	Geol. 311—Structural Geology	4
Language[2]	4	Geol. 332—Mineralogy	4
Math. 140—Calculus and Analytic Geometry	3	Language[2]	4
Physical Education	1	Physical Education	1

THIRD YEAR	15 OR 16 HOURS		15 OR 16 HOURS
Geol. 320—Invertebrate Paleontology	4	Geol. 321—Stratigraphy	4
Physics 106—General Physics (Mechanics)	4	Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Social Science	3 or 4	Social Science	3 or 4
Elective[4]	4	Elective[4]	4

FOURTH YEAR	15 TO 18 HOURS	16 TO 19 HOURS
Geol. 335—Optical Mineralogy	4	
Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4	
Humanities	3 or 4	
Elective[4]	4 to 6	
Geol. 336—Petrography		4
Humanities		3 or 4
Elective[4]		9 to 11

NOTES

[1] Students who do not qualify for Mathematics 120 or a more advanced mathematics course in the first semester must start mathematics at a lower level.
[2] See the sciences and letters curriculum, foreign language requirements, for ways in which this requirement may be satisfied.
[3] Biology 110 and 111 or Botany 100 and Zoology 104 are recommended.
[4] One elective must be chosen from the following courses: Geology 301, Geomorphology; Geology 307, Advanced Dynamic Geology; and Geology 357, Glacial and Pleistocene Geology.

Home Economics

MAJOR IN HOME ECONOMICS

A minimum of 120 hours is required for graduation.

	HOURS
Art 185—Design[1]	2
Biological Sciences[1]	9
Microbiol. 100—Introductory Microbiology 3	
Microbiol. 101—Introductory Experimental Microbiology 2	
Physiol. 103—Introduction to Human Physiology 4	
Humanities—American or English Literature or Humanities from approved general education sequences (page 364)	6 to 9
Language	16
Math. 111—Algebra, or Math. 112—College Algebra	3 or 5
Physical Sciences	8
Chem. 101 and 102—General Chemistry 8	
Rhet. 101–102—Freshman Rhetoric and Composition	6
Social Sciences[1]	10
Econ. 108—Elements of Economics 3	
Psych. 100—Introduction to Psychology, or Psych. 103—Human Behavior 4	
Sociol. 100—Introduction to Sociology 3	
Major	28 to 39
Home Economics Courses:	
Home Econ. 100—Orientation to Home Economics 0	
Fourteen hours chosen from:	
Home Econ. 105—Child and Family 4	
Home Econ. 132—Foods and Nutrition 3	
Home Econ. 133—Food Management 2	
Home Econ. 160—The Home and Its Furnishings 4	
Home Econ. 171—Home Management 2	
Home Econ. 183—Consumer Textiles 2	
Home Econ. 184—Clothing Selection 2	
Fourteen to twenty-five hours in additional home economics courses as listed under one of these options: (1) apparel design, (2) the child and the family, (3) foods and nutrition, (4) general home economics, (4A) foods in business, (5) hospital dietetics, (6) household management, (7) institution management, (8) retailing of clothing and home furnishings, (9) textiles and clothing. (See page 224.) Other courses required in specific options (see page 224)	6 to 30
Minor	0 to 20
Twenty hours from one of the following groups: (1) chemistry, mathematics, microbiology; (2) anthropology, economics, psychology, sociology. The minor may be comprised of one subject only, or two subjects with at least eight hours in each.	
Electives	0 to 18

NOTES

[1] Students in option 1 need not take Art 185, but do take the art courses prescribed in that option. Students in options 1 and 8 are not required to take the prescribed microbiology and physiology courses, but they must take a total of 12 hours of laboratory sciences including Chemistry 101 and 102. They may wish to substitute Psychology 103 to satisfy the biological science sequence requirement. Economics 108 and another approved economics course (see page 365) will satisfy the social science sequence requirement.

MINOR IN HOME ECONOMICS — **HOURS**

Home Econ. 105—Child and Family	4
Home Econ. 210—Family Relationships	3
Additional credit hours have to be chosen from the following areas (a minimum of five hours must be chosen from each of two areas)	13

FOODS AND NUTRITION

Home Econ. 120—Elementary Nutrition	2
Home Econ. 125—Food Selection and Preparation	3
Home Econ. 132—Foods and Nutrition	3
Home Econ. 133—Food Management	2
Credit is not given for Home Economics 132 and 133 in addition to Home Economics 120 to 125.	
Home Econ. 220—Principles of Nutrition	3
Home Econ. 231—Foods	3

HOME MANAGEMENT, HOUSING, AND HOME FURNISHINGS

Home Econ. 160—The Home and Its Furnishings	4
Home Econ. 171—Home Management	2
Home Econ. 260—Period Styles in Home Furnishings	3
Home Econ. 270—Family Financial Management	3
Home Econ. 271—Home Management	2
Credit is not given for Home Economics 171 and 270 in addition to Home Economics 271.	

TEXTILES AND CLOTHING

Home Econ. 182—Clothing Laboratory	2
Home Econ. 183—Consumer Textiles	2
Home Econ. 184—Clothing Selection	2
Home Econ. 280—Household Textiles	2
Home Econ. 285—History of Costume	2
Home Econ. 287—Consumer Clothing Problems	2

Curriculum in Physics

For the Degree of Bachelor of Science in Physics

The curriculum in physics is recommended for students who plan to enter graduate study in physics or who wish to prepare to enter government or industrial laboratory research positions upon attaining the bachelor's degree. It specifies the courses essential to a strong foundation in physics and permits concentration in the first two years on basic courses which are prerequisite to advanced courses in physics and mathematics.

The curriculum is planned for students entering with four years of high school mathematics, including trigonometry (see, however, note 3, below), a year of chemistry, and no French, German, or Russian. Students who can satisfy the college language requirement on entering have the distinct advantage of adding sixteen hours of electives to their course of study. Students who have a year of high school biology also have more freedom in choice of electives (see note 4, page 372).

To enroll in the physics curriculum, an entering freshman must rank in the upper half of his high school class. To be permitted to register in advanced physics or mathematics courses in this curriculum, a student must have a grade-point average of at least 3.5 in all subjects, exclusive of the basic courses in military training and physical education, and a combined grade-point average of at least 3.5 in all courses completed in

physics and mathematics. Transfer students must have a corresponding record in the institution from which they transfer.

A minimum of 126 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	16 HOURS
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry[1]	4
German, French, or Russian[2]	4	German, French, or Russian[2]	4
Math. 120—Calculus and Analytic Geometry[3]	5	Math. 130—Calculus and Analytic Geometry[3]	5
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1
SECOND YEAR	**15 HOURS**		**15 HOURS**
German, French, or Russian[2]	4	German, French, or Russian[2]	4
Math. 140—Calculus and Analytic Geometry[3]	3	Math. 343—Advanced Calculus	3
Physics 106—General Physics (Mechanics)	4	Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Physical Education	1	Physical Education	1
Electives[4]	4	Electives[4]	4
THIRD YEAR	**15 HOURS**		**16 HOURS**
Math. 345—Differential Equations and Orthogonal Functions	3	Physics 321—Theoretical Mechanics	4
Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4	Physics 342—Electricity and Magnetism	4
Physics 341—Electricity and Magnetism	4	Electives[4]	8
Electives[4]	4		
FOURTH YEAR	**17 HOURS**		**16 HOURS**
Physics 386—Atomic Physics and Quantum Mechanics, I	4	Physics 387—Atomic Physics and Quantum Mechanics, II	4
Physics Elective[5]	4	Electives[4]	12
Electives[4]	9		

NOTES

[1] The chemistry requirement may be satisfied by a year of general chemistry selected from Chemistry 101 through 108. A maximum of eight hours in general chemistry is counted toward the degree except that ten hours are allowed for Chemistry 107 and 108.

[2] The language requirement is a reading knowledge of German, French, or Russian. See the sciences and letters curriculum, foreign language requirements (page 363), for ways in which this requirement may be satisfied.

[3] The prerequisite to entering the stated sequence in mathematics is three to four years of high school mathematics, including trigonometry, and a satisfactory grade on the Mathematics Placement Test. A student having college credit for algebra and trigonometry is not required to take these examinations. A student who does not meet the above prerequisite may meet the requirements in basic mathematics with the sequence Mathematics 112, 114, 120, 130, 140 (but receives only thirteen hours credit toward the degree).

[4] The elective subjects must satisfy the general education sequence requirements of the sciences and letters curriculum, except that students offering one unit or more of biology for admission may substitute additional courses in humanities and social sciences for the biological science requirement. Students are advised to include six to eight hours of physics and three to six hours of mathematics among the remaining electives.

[5] One of the following is required: Physics 322, 360, or 371.

Curriculum in Speech and Hearing Science

For the Degree of Bachelor of Arts in Speech

The curriculum in speech and hearing science is a preprofessional degree program. The curriculum is designed to prepare students to enter professional training at the graduate level in speech pathology or audiology. Students who desire certification for work in the public schools can complete certification requirements by completing a minor in education and completing the Master of Science degree.[1] To remain in good standing in the curriculum the student must have achieved a cumulative college average of at least 3.65 by the completion of his junior year. The Bachelor of Science degree requires completion of at least 128 semester hours (exclusive of physical education) as described below.

	HOURS
General Education	23
The biological science sequence may be satisfied by either Zoology 104-Elementary Zaology, or Physiology. 103-Introduction to Human Physiology, and Psychology. 103-Human Behavior. The physical science sequence may be satisfied by eight hours of mathematics (mathematics 120 and 131-Calculus and Analytical Geometry, I and II, are recommended); Liberal Arts and Sciences 141–142—Physical Science, I and II, or eight hours in either physics or chemistry. The approved social science sequence is required; see the list of approved sequences under the sciences and letters curriculum in the College of Liberal Arts and Sciences. (Note: A course in political science covering both state and federal constitutions and a course in United States history should be chosen if the student is interested in the school speech and hearing program.)	
Physical Education	4
Rhetoric	6 to 8
Speech 111–112—Verbal Communication (eight hours), may be substituted for Rhetoric 101–102—Freshmon Rhetoric and Composition (six hours), and Speech 101—Principles of Effective Speaking.	
Foreign Language	0 to 16
A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a fareign language commenced in college is required (see foreign language requirement, page 363).	
Psychology	12
Psych. 135—Statistical Thinking in Psychology	3
Psych. 216—Child Psychology, or Ed. Psych. 236—Child Development for Elementary Teachers	3
Psych. 250—Psychology of Personality	3
Psych. 248—Psychology of Learning, or Ed. Psych. 311—Psychology of Learning for Teachers	3
Speech	52
Speech 101—Principles of Effective Speaking	3
Speech 105—Voice and Articulation	2
Speech 109—Introduction to Physialogical Phonetics	3
Speech 175—Introduction to Speech Pathology and Audiology	2
Speech 375—Speech Science, I	3
Speech 376—Speech Science, II	3
Speech 378—Hearing Science	3
Speech 383—Development of Spoken Language	3
Speech 385—Speech Pathology, I	3
Speech 386—Basic Diagnastic and Therapeutic Principles of Speech Correction	3
Speech 387—Practicum in speech Diagnosis and Therapy	3
Speech 388—Speech Pathology, II	3
Speech 389—Psychological Appraisal in Speech Pathology and Audiology	3
Speech 391—Introduction to Hearing Disorders	3
Speech 393—Aural Rehabilitation	3
Speech 395—Audiometry	3
Speech 398—Practicum in Audiology	3
Speech 399—Design and Analysis of Experiments in Speech and Hearing Science	3

Electives.....18 to 34
Recommended electives are: Mathematics 112—College Algebra; Speech 141—Oral Interpretation; Speech 121—Advanced Public Speaking: The Logical Bases of Discourse; Music 100—Rudiments of Theory; Music 101—Theory of Music, I; a course in philosophy, history, political science, or ecanamics, ar caurses in the student's minor area. Recammended minor areas include: psychology, education, mathematics, physialagy, linguistics, or psycholinguistics.

Education.....at least 18 hours for certification

NOTES

[1] If the student plans to pursue the school speech and hearing program, it is recommended that his minor be education and that he elect courses required for state certification including: Special Education 117—Exceptional Children; Elementary Education 233—Classroom Problems in Childhood Education; Special Education 324—Mental and Educational Measurement of Exceptional Children.

COOPERATIVE INTERDEPARTMENTAL MAJORS AND MINORS

Program in American Civilization

This program is sponsored by the Division of Humanities. The faculty adviser for majors in this program is Professor W. D. Farnham, 314 Gregory Hall.

FOR STUDENTS WHOSE MAJOR IS AMERICAN CIVILIZATION

Students who elect American civilization as a major must complete forty semester hours (which satisfies both major and minor requirements for graduation) in courses indicated below, at least twenty hours being in courses numbered 300 or above. They are required to maintain a 3.0 general average at all times; that is, when the average drops below that level the student shall drop from this major. The following courses are required:

1. English 255, 256; History 151, 152; and either Art 323 or 324 (a total of fifteen hours). Equivalent or more advanced courses may be substituted provided that taken together they constitute comprehensive surveys of the three fields of American history, American literature, and either American art or American philosophy. Approval for any such substitutions must be requested by a petition to the dean bearing the recommendation of the adviser for the curriculum.

2. At least six hours of advanced work in history and at least six hours of advanced work in English chosen from the following courses all of which are in the American field: English 285, 286, 287, 316, 352, 354, 375, 376; History 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 367, 368, 369, 370, 371, 372, 373, 374. Speech 366 may be substituted for English 316.

3. At least six hours from Architecture 315, 316; Economics 236; History and Philosophy of Education 302; Geography 223; Political Science 150, 151, 351, 381, 397; Speech 312; or courses listed in the preceding paragraphs, if not counted toward the requirements thereunder.

4. At least six additional hours in one of the following departments: Art, English, History, Philosophy, or Political Science, chosen from courses which deal with non-American aspects of the subject but which are closely related to specific courses selected under the preceding requirements such as a course dealing with the same period in European history or in English literature. The committee in charge of the program advises each student concerning these additional hours, assumes responsibility for the student's registration in the proper courses, and files a record of the student's registration indicating the specific courses approved as satisfying this requirement in the office of the College of Liberal Arts and Sciences.

FOR STUDENTS WHOSE MINOR IS AMERICAN CIVILIZATION

This program has been approved as a minor for students majoring in geography, history, political science, and speech. A split minor is not authorized. No course counted toward the student's major may be counted toward the minor. The minor consists of at least twenty semester hours, including the required courses History 151–152 and English 116 and the following additional requirements:

1. At least three hours from courses listed under (2) of the requirements for the major in American civilization, excluding those numbered under 300 and excluding those in the department in which the student is majoring.
2. The remainder, if any, chosen from courses listed under (1) and (3) of the requirements for the major in American civilization, excluding those numbered under 300 and excluding those in the department in which the student is majoring.

Program in Asian Studies

This program is sponsored by the Center for Asian Studies and is administered by the Center's Director, Robert B. Crawford, Room 201, 1208 West California Avenue, Urbana.

FOR STUDENTS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Minor: A minor in Asian Studies requires at least twenty semester hours, including Asian Studies 202, distributed among at least three departments and chosen from the following:

Agricultural Economics 353
Anthropology 315,* 316,* 368, 375, 383, 384, 386, 387
Arabic 201, 202, 203, 204, 303, 304, 305, 306, 307, 308
Art 209, 302, 306, 316, 326, 327, 328
Asian Studies 202, 295, 345
Burmese 201, 202, 303, 304
Chinese 201, 202, 203, 204, 205, 206, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 320 (same as Japanese 320), 330, 350
Comparative Literature 309
Economics 353, 358
Geography 351, 357
Hindi 201, 202, 303, 304, 305, 306, 307, 308, 309, 310
History 209, 210, 298,* 307, 308, 374, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399
Indonesian 201, 202, 303, 304
Japanese 201, 202, 203, 204, 205, 206, 301, 302, 303, 304, 305, 306, 309, 310, 320 (same as Chinese 320), 330
Korean 201, 202, 303, 304, 330
Law 371*
Linguistics 303,* 330, 350, 351, 360, 382, 383
Modern Hebrew 201, 202, 303, 304, 305, 306, 307, 308
Music 316,* 317*
Persian 201, 202, 205, 206, 303, 304, 305, 306, 309
Philosophy 361, 369
Political Science 337, 338, 346, 347, 348, 349, 380,* 389
Religious Studies 297
Rural Sociology 343*
Sociology 309, 328, 335, 343,* 355, 371*
Courses marked with an asterisk (*) may be taken when offered on Asia.

Any of these courses used for major credit may not be included in the twenty hours for the minor. It is advisable either to include in the minor, or to accompany the minor with, one of the 201–202 Asian language sequences offered. A four-semester sequence in an Asian language may be elected to meet the language requirements of the college. The languages listed above are offered by the Center for Asian Studies and the Department of Linguistics.

FOR STUDENTS NOT IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students in other colleges and schools of the University who desire a knowledge of East, Southeast, South, and Southwest Asian affairs and cultures are invited to consult, either directly or through their adviser, with the Director and faculty members of the Center for Asian Studies in order to develop course programs suited to their individual needs.

Program in Latin American Studies

This program is sponsored by the Center for Latin American Studies, 1208 West California Avenue, Urbana.

Latin American studies is offered only as a minor program for students in the College of Liberal Arts and Sciences.

Students who elect Latin American studies as a minor shall be required to:

1. Complete the prescribed and general education sequences required in the sciences and letters curriculum.
2. Complete six semesters or equivalent of college Spanish or Portuguese. If a student wishes to take both Spanish and Portuguese, he may take two years of each to satisfy this requirement. (In cases of well-qualified students the language requirements may be modified.)
3. Complete at least twenty semester hours from the following courses, including Latin American Studies 201, chosen from among four departments: Anthropology 332, 333, 349, 350, 352, 361, 364, 365, 380; Art 318; Botany 300; Economics 352; Geography 331, 332; History 275, 276, 377, 378; Music 336; Latin American Studies 195, 201; Political Science 342, 343; Portuguese 201, 290, 301, 303, 304; Sociology 373; Spanish 222, 242, 307, 308, 310, and 332.

Courses used for major credit outside the Latin American studies program may not be included within this twenty hours.

Split Minor. Students may split a minor between Latin-American studies and another department but must meet the language requirement and take at least twelve semester hours from Latin-American studies, including Latin American Studies 201 and courses from at least two departments in the program exclusive of courses used for the major.

FOR STUDENTS NOT IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students in technical and professional colleges and schools of the University who seek knowledge of Latin American affairs, culture, and languages are invited to consult with members of the teaching staff of the Latin American studies program, either directly or through their advisers, in order to develop programs suited to their individual needs. Such a program may often be adopted as a special minor under existing regulations if the student so desires. It is recognized that the number of elective hours available for such special area studies varies among many of the eight- and ten-semester programs in the University, but most students wishing to increase their proficiency in Latin American affairs can do so without overcrowding of schedules. These courses are of particular value to students who intend to carry on technical or professional work in the Latin American area for the government, private business, publications, or religious organizations.

Program in Medieval Civilization

This program is sponsored by the Division of Humanities. Interested students should report to 314 Gregory Hall.

Students who elect medieval civilization as a major must complete the lower division requirements of the College of Liberal Arts and Sciences and forty semester hours (which satisfies both the major and minor requirements) in courses chosen from the following list: Architecture 214; Art 308 or 309; Classical Civilization 301, 302; English 311; History 301, 302, 303, 304, 305, 333, 345; Italian 311, 312; Latin 104; Philosophy 304; Speech 361. Other courses may be substituted with the approval of the adviser; advanced reading courses in any foreign language offered by the University are strongly recommended.

Program in Religious Studies

The interdepartmental Program in Religious Studies is sponsored by the College of Liberal Arts and Sciences and the Departments of Anthropology, Classics, History, Philosophy, and Sociology. The Director of the Program is Professor William R. Schoedel of the Department of the Classics, 361 Lincoln Hall. Students wishing to study in this area should consult with their advisers and with the Director of the Program to develop individual programs suited to their needs and interests.

Minor: A minor in religious studies, designed to accompany a major in any department, requires at least twenty semester hours (including Humanities 201 and 202) distributed among at least three departments and chosen from the following courses: Anthropology 363; Classical Civilization 111; History 304, 306, 307, 398, 399; Humanities 201, 202, 203, 205, 206, 208; Philosophy 110, 304, 324, 361, 362, 363; Sociology 229, 328.

Program in Russian Language and Area Studies

This program is sponsored by the Russian and East European Center and is administered by the program director, Professor R. T. Fisher, Jr., 1207–305 West Oregon Street, Urbana.

FOR STUDENTS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Major: Students who elect Russian language and area studies as a major must:

1. Complete the prescribed and general education sequences required in the sciences and letters curriculum.
2. Complete at least twenty semester hours of Russian language courses, in addition to Russian 101 and 102, or demonstrate equivalent proficiency.
3. Complete a major consisting of at least twenty semester hours distributed among at least four departments and chosen from the following: Anthropology 381, 382; Economics 357; Geography 353; History 219, 320, 321, 325, 326, 327, 328; Political Science 335, 383; Russian 115, 116, 199, 217, 301, 302, 317, 321, 322, 323, 324, 325, 326, 332, 333, 335, 337; Sociology 350; Ukrainian 396, 398. Courses used for major or minor credit outside the program of Russian language and area studies may not count as part of this twenty hours.
4. Complete a minor of twenty hours, excluding courses open to freshmen, in one or two departments. If two are chosen, at least eight hours must be taken in each. Courses in the Russian language may, with the approval of the program director, constitute all or part of this minor.

Minor: A minor in Russian language and area studies, designed to accompany a major in any department, requires as least twenty semester hours distributed among at least three departments and chosen from the following: Anthropology 381, 382; Economics 357; Geography 353; History 219, 320, 321, 325, 326, 327, 328; Political Science 335, 383; Russian 115, 116, 199, 217, 301, 302, 317, 321, 322, 323, 324, 325, 332, 333, 335, 337; Sociology 350; Ukrainian 396, 398. It also requires a knowledge of Russian equivalent at least to that normally attained after Russian 101 and 102.

FOR STUDENTS NOT IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students in other colleges and schools of the University who desire a knowledge of the Russian area are invited to consult, either directly or through their advisers, with the program director for Russian language and area studies in order to develop programs suited to their individual needs. Such programs may in some cases be adopted as a special minor.

Program in Social Welfare

This program is sponsored by the Jane Addams Graduate School of Social Work. The faculty adviser is Professor Richard Anderson, 1207 West Oregon Street, Urbana.

The undergraduate program in social welfare stipulates that the student complete the basic requirements of the sciences and letters curriculum; that he complete a course in statistics or nonstatistical research methodology; that he complete at least twelve hours in courses in social work; and that he complete at least twenty-eight hours in selected courses from eight departments.

Students who elect social welfare as a major must complete the following, which satisfy either major or minor requirements for graduation:

1. Complete the prescribed and general education sequences required in the sciences and letters curriculum.
2. Complete one of the folowing: Psychology 135 or 235; Economics 171; Sociology 184 or 185; Mathematics 161.
3. Complete from twelve to fifteen hours in social work courses.
4. Complete at least twenty-eight hours from the following courses selected from at least four departments: Anthropology 260, 270, 330, 373,* 380; Economics 214,* 236, 240, 342;* History 358, 360,* 361,* 362,* 363, 364; Home Economics 120, 125, 202, 203, 210, 270, 271, or 171; Philosophy 306, 311, 321, 322, 335, 336; Political Science 305,* 306,* 315,* 326, 329, 345, 350,* 351, 355, 361,* 362; Psychology 216,* 250,* 338,* 348,* 359, 360, 373; Sociology 120, 131, 212, 218, 223, 225, 231,* 240, 275, 276, 300, 316,* 317, 320, 321, 322,* 323, 324, 329, 331,* 333,* 340, 359,* 360.*

(Asterisks denote courses which have special relevance to the proposed major program.)

PREPROFESSIONAL PROGRAMS

Health Professions

The college has organized a Health Professions Information Office, which is located in 235h Armory. The dean and faculty view the mission of this office as being threefold: (1) to provide an opportunity for students interested in the health professions to assemble a confidential file of faculty letters of recommendation, (2) to provide for both students and faculty a resource center for information concerning careers in the health professions, and (3) to provide an opportunity for deans and admissions officers to visit our campus to interview prospective applicants and to acquaint our students with the unique educational features that characterize their institutions.

The office will act as a clearing house to supply students with Standard Faculty Recommendation Forms by which they may secure letters of recommendation from the faculty at any time during their college career. This office will keep these letters in a confidential file and will duplicate and forward them, *unedited,* along with a Summary Evaluation Letter written by a Health Professions counselor. The request for a summary letter to be written is optional.

Because of the large number of students applying to professional schools from the College of Liberal Arts and Sciences, it is essential that each student join in the responsibility for compiling the information upon which his recommendation will be based. If a student desires to utilize this office in his application to professional schools, he will be assigned a registrant folder and will be asked to supply essential biographical data. He does not have to use this service; but it can save him, his instructors, and his adviser a great deal of duplicated effort. Also, it enables him to solicit letters while the recommender's impression of him is fresh, rather than after several years of lack of contact. All professional schools require letters of recommendation.

Curriculum in Medical Dietetics

Minimum requirements for admission to the curriculum in medical dietetics at the School of Associated Medical Sciences, College of Medicine, are sixty semester hours, exclusive of physical education and basic military training, with at least a 3.0 average, in conformity with the list given below:

Rhetoric or Verbal Communications: two semesters.
Biological Sciences: One year of biology and one course in microbiology. Recommended: Biology 110 and 111, and Microbiology 100.
Physical Sciences: Chemistry through organic. Recommended: Chemistry 101, 102, 131 and 134.
Mathematics: Mathematics 112 or equivalent.
Humanities: An approved general education sequence.
Social Sciences: An approved general education sequence.
Economics: One course. Recommended: Economics 108.
Electives: Sufficient electives to complete a total of sixty semester hours, exclusive of physical education and basic military training.

The Committee on Admissions to the third year of the curriculum in medical dietetics selects applicants on the basis of scholastic record, aptitude, and appropriate personal characteristics. The Committee includes representatives from the College of Medicine, the College of Liberal Arts and Sciences, and the Office of Admissions and Records. Interested students should consult Dr. Janice M. Smith, 260a Bevier Hall, Urbana, for information concerning the courses offered on the Urbana-Champaign campus which satisfy the preprofessional requirements for admission to the professional phase at the Medical Center.

Curriculum in Medical Record Administration

Minimum requirements for admission to the curriculum in medical record administration in the College of Medicine are ninety semester hours, exclusive of physical education and basic military training, with at least a 3.0 average, in conformity with the following list:

Foreign Language: A reading knowledge of a foreign language equivalent to that resulting from four semesters of study in college. Each year of foreign language completed in high school is accepted as the equivalent of one semester in college.
General Education Sequences: Approved general education sequences are required in biological sciences, humanities, physical sciences, and social sciences.
Physiology: Course 234.
Rhetoric: Courses 101 and 102, or Speech 111 and 112, or equivalent.
Electives: Sufficient electives to complete the required ninety semester hours.

The Committee on Admissions to the fourth year of the curriculum in medical record administration selects applicants on the basis of scholastic record, aptitude, and appropriate personal characteristics. The Committee includes representatives from the College of Medicine, the College of Liberal Arts and Sciences, and the Office of Admissions and Records.

Curriculum in Medical Technology

Minimum requirements for admission to the curriculum in medical technology at the College of Medicine are ninety semester hours, exclusive of physical education and basic military training, with at least a 3.0 average, in conformity with the list given below:

Biological Sciences: Sixteen hours chosen from the biological sciences, including Microbiology 200 and 201.
Chemistry: Courses 101, 102, 122, 133. Chemistry 107 and 108 may be taken in place of 101 and 102.
Foreign Language: A reading knowledge of a foreign language equivalent to that resulting from four semesters of study in college. Each year of foreign language completed in high school is accepted as the equivalent of one semester in college.
Humanities: An approved general education sequence.
Mathematics: Courses 104 or 114.
Physics: Courses 101 and 102. Physics 106, 107, and 108 may be taken in place of 101 and 102.
Rhetoric: Courses 101 and 102, or Speech 111 and 112, or equivalent.
Social Science: An approved general education sequence.
Electives: Sufficient electives to complete a total of ninety semester hours, exclusive of basic military training and physical education.

The Committee on Admissions to the fourth year of the curriculum in general medical technology selects applicants on the basis of scholastic record, aptitude, and appropriate personal characteristics. The Committee includes representatives from the College of Medicine, the College of Liberal Arts and Sciences, and the Office of Admissions and Records.

Occupational Therapy

This program, which is open to both men and women, combines six semesters of work in the College of Liberal Arts and Sciences with five quarters in the School of Associated Medical Sciences, College of Medicine, Medical Center campus.

The work on the Urbana campus, which is mainly of a preprofessional character, is shown below. The student must accumulate a minimum of ninety semester hours, a 3.5 cumulative grade-point average, and satisfy all the preprofessional requirements before transferring to the College of Medicine. See page 64 for listing of requirements necessary for admission to this program.

FIRST YEAR	SEMESTER HOURS
Art 123—Fundamentals of Drafting and Drawing	3
Art 185—Design	2
Chemistry 101 and 102 OR L.A.S. 141 and 142—Physical Science	8
Electives (approved)	3
Humanities (approved sequence)	8
Physical Education (including P.E.W. 143)	2
Rhetoric 101 and 102 OR Speech 111 and 112	6 or 8
	32 or 34

SECOND YEAR	
Art 186—Design	2
Electives (approved)	6 to 8
Home Econ. 105—Child and Family	4
Occupational Therapy Orientation 100	2
Physiol. 103—Introduction to Human Physiology	4
Psych. 103—Human Behavior	4
Sociol. 151 and 152—Study of Society, or approved equivalents	8 to 6
Physical Education	2
	32

THIRD YEAR	
Art 194—Pottery, I	2
Electives (approved)	6
H.E. 216—Medical Terminology Correlated with Community Health Problems	3
Home Econ. 193—Textile Arts for Occupational Therapy	4
Physiol. 234—Human Anatomy and Physiology	5
P.E.W. 206—Kinesiology	3
Psychology (approved sequence)	3
Vo. Tech. Ed. 181—Introductory Woodwork	4
	30

Predentistry

The predentistry program listed below includes the courses required for admission to the College of Dentistry at the University of Illinois. Specific admission requirements of other dental schools are listed in the *Admission Requirements of the American Dental Schools,* published by the American Association of Dental Schools, 211 East Chicago Avenue, Chicago, Illinois 60611.

Undergraduate freshmen who rank in the upper half of their graduating class in high school are eligible for admission to the predentistry program. Students with ad-

vanced standing who wish to transfer to the predentistry program must have a grade-point average of at least 3.25 computed in terms of the University grading system.

The predental curriculum is basically a three-year program, although a few students are accepted by some dental schools after two years of undergraduate work. In the first two years, the student is subject to the requirements (see pages 363–366) of the College of Liberal Arts and Sciences concerning general education sequences, grade-point averages, and physical education. In the third year, he becomes subject to the requirements of the College of Liberal Arts and Sciences concerning a foreign language, a major, and a minor. The student will therefore fulfill the requirements for graduation at the Urbana-Champaign campus if he remains at the campus for his fourth year.

The following courses offered at the Urbana-Champaign campus must be included in the study program in order to satisfy the course requirements for admission to most dental schools, including the College of Dentistry at the University of Illinois.

	SEMESTER HOURS
Rhetoric 101, 102, or Speech 111, 112	6 or 8
Inorganic Chemistry (Chemistry 101–102 or Chemistry 107–108)	8
Organic Chemistry (Chemistry 131–134)[1]	5
Physics 101, 102 or 106, 107, 108	10 or 12
Biology (Biology 110–111)	10

NOTE

[1] Many schools, including the College of Dentistry at University of Illinois, require or recommend an additionol course such as Chemistry 122, Chemistry 336, or Biochemistry 350.

While the student is enrolled in the predental curriculum, he may take as many as one pass-fail course per year, providing the course is not required for admission to dental school.

Prelaw

The education of a lawyer begins long before he enters law school. His effective and satisfying pursuit of the profession may depend not only upon mastery of the scope and operation of the legal system, but also upon proficiency in verbal expression, comprehension of and ability to analyze complex subjects, understanding of the physical and social worlds in which we live, ability to associate and work with others, and disposition to accept and discharge responsibility. A law school cannot develop all these qualities in its students during three years of legal training. Thus, good law schools everywhere require substantial prelegal study as a condition of admission to law study. This period of education before law school should be looked upon as a very important phase of one's preparation for a place in the legal profession and in society generally. A student should select his prelegal studies for maximum benefit, not with undue regard for minimum requirements.

Because prior education in diverse fields may prove valuable to the law student and to the graduate lawyer, schools of law have no specific requirements with regard to the courses chosen in prelegal study. The faculty of the University of Illinois College of Law has prepared a pamphlet entitled *Education for a Career in Law* which suggests various courses and programs that may be helpful in preparation for law study. A copy of this pamphlet may be obtained by addressing an inquiry to the College of Law, University of Illinois, Champaign, Illinois 61820. The Association of American Law Schools has also prepared *Law Study and Practice in the United States* (West Publishing Co.; St. Paul, Minn.).

See page 58 for the admission requirements of the Illinois College of Law.

Premedicine

Individuals anticipating a career in medicine must major in a University department, incidentally fulfilling the requirements for admission to the medical schools of their choice. There is no prescribed curriculum for premedical students. A major in biology, or in the Departments of Zoology, Physiology and Biophysics, and Microbiology, or in

the Department of Chemistry and Chemical Engineering is especially suitable since major requirements in these departments overlap to some extent with medical school requirements. A major in psychology or in the humanities or fine arts is acceptable to medical school. In practice, however, it is difficult to concentrate in these areas and fulfill the present medical school requirements, especially if the student plans to apply for entry after three years.

The strong sequential nature of some programs (e.g., the science departments) requires that appropriate course selections be made in the first year if a sound program is in fact to be achieved. It is, for example, important that the entering science oriented students elect mathematics since calculus is a prerequisite for some courses in chemistry, physics, and biology.

The minimum requirements for admission to the University of Illinois College of Medicine are outlined on page 62. Students anticipating a career in medicine are advised to obtain additional information from those medical schools in which they are interested. Specific admission requirements for individual medical schools are listed in *Medical School Admission Requirements*, published by the Association of American Medical Colleges, One Dupont Circle, Northwest, Washington, D.C. 20036.

The College of Liberal Arts and Sciences accepts a maximum of thirty-two hours of credit from the first year at an accredited medical school to complete the requirements for a bachelor's degree, provided that (1) the student is in good standing in the medical school; (2) work taken at the medical school does not duplicate work taken in premedical courses and that it is non-clinical; (3) the student completes his first ninety hours (exclusive of military science and physical education) at the University of Illinois; and (4) the student meets all requirements for graduation from the College of Liberal Arts and Sciences.

Preprofessional Nursing

The University offers a degree program leading to the Bachelor of Science in Nursing for students coming directly from high school or for registered nurses who meet a specific set of requirements. The program is made up of two phases, a preprofessional year in the College of Liberal Arts and Sciences and the professional phase administered by the College of Nursing.

Admission to the preprofessional year is restricted to students who rank in the upper half of their high school graduating class and who are eligible to enter the College of Liberal Arts and Sciences. Transfer students must have a 3.0 scholastic average. Graduates of hospital schools of nursing are admitted with advanced standing, the exact amount of credit to be granted depending on the nature of the work done, validating examinations, and the quality of performance in sequential courses.

Admission to the professional phase is on recommendation of the Admissions Committee of the College of Nursing after completion of the following requirements:

	HOURS
Chem. 101 and 102—General Chemistry	8
Biol. 100—Biological Science, or Zool. 104—Elementary Zoology	4
Humanities	6
Physical Education	2
Psych. 100—Introduction to Psychology	4
Rhet. 101 and 102—Rhetoric and Composition	6
Sociol. 100—Introduction to Sociology	3
Total	33

For additional information about the programs in nursing, write to the Office of Admissions and Records, 1853 West Polk Street, P.O. Box 6998, Chicago, Illinois 60680.

Prepharmacy

Admission to the College of Pharmacy of the University of Illinois requires approval by the Admissions Committee of that college. To be eligible for consideration by the Committee a student must:

1. Present six hours of rhetoric, eight hours of general chemistry, three hours of college algebra, and two hours of trigonometry;
2. Have a total of thirty hours of credit excluding health education, military training, and physical education;
3. Have a grade-point average of at least 3.0.

The specific requirements can be met on the Urbana-Champaign campus through Rhetoric 101, 102, or equivalent; Chemistry 101, 102; Mathematics 112 (or 111), 114. These courses total nineteen to twenty-two hours. Additional work necessary to complete thirty hours may be taken in any Liberal Arts and Sciences courses usually not required in the College of Pharmacy curriculum, such as courses in the social sciences and humanities.

Students who transfer into this curriculum must have a grade-point average of at least 3.0. If they transfer at the end of their first semester they may find it necessary to complete the admission requirements of the College of Pharmacy in the summer session.

Preveterinary

Students applying for admission to the preveterinary program must rank in the upper half of their high school graduating classes. They must maintain at least a 3.5 average to remain in the program; otherwise they are transferred to the sciences and letters curriculum.

Students transferring with advanced standing must have maintained at least a 3.5 average in terms of the University's grading system.

A minimum of a 3.5 average and sixty semester hours, exclusive of physical education and military science, are required for admission to the College of Veterinary Medicine.

FIRST YEAR

FIRST SEMESTER	14 OR 15 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Biol. 110—Principles of Biology, I	4	Biol. 111—Principles of Biology, II	4
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry	4
Math. 114—Plane Trigonometry, or Math. 104—Elements of Algebra and Trigonometry or Elective[2]	2 or 3	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Physical Education	1
Physical Education	1	Electives[3]	4 or 5

SECOND YEAR	17 TO 19 HOURS		17 TO 19 HOURS
Chem. 133—Elementary Organic Chemistry, or Chem. 122—Elementary Quantitative Analysis	5	Chem. 133—Elementary Organic Chemistry, or Chem. 122—Elementary Quantitative Analysis	5
Language[4]	4	Language[4]	4
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	Physics 102—General Physics (Light, Electricity, and Magnetism)	5
Physical Education	1	Physical Education	1
Electives[3]	2 to 4	Electives[3]	2 to 4

NOTES

[1] Students who do not earn a satisfactory score on the Chemistry Placement Test must take Chemistry 100 before enrolling in Chemistry 101. Also, it should be noted that the prerequisite for Chemistry 101 is Mathematics 111 or 112, or exemption from Mathematics 112 on the Mathematics Placement Test. Students who do not satisfy both of these requirements must delay Chemistry 101 until the second semester, and then attend a summer session if they wish to complete all preveterinary requirements in two years.

[2] Students who have at least one-half unit in high school trigonometry are not required to take trigonometry. Such students should select a three- or four-hour course in the general education sequences.

[3] All students are required to complete an approved six-hour sequence in the humanities and an approved six-hour sequence in the social sciences. A list of approved sequences appears on page 364.

[4] The foreign language requirement may be fulfilled by three years of one foreign language from

high school or by demonstrating competence equivalent to one year of foreign language at the college level. Competence may be demonstrated by placement examination or by successful completion of the second semester of the language.

TEACHER EDUCATION CURRICULA

Curriculum Preparatory to the Teaching of Biology

For the Degree of Bachelor of Science in the Teaching of Biology

While this curriculum is primarily designed for students preparing to teach biology, it also permits the breadth of work in the sciences required for teaching general science at the junior high school level. The courses outlined below total to a minimum of 131 hours; satisfactory competence in the subject areas listed must be demonstrated; and a minimum of 120 hours of credit, not counting the first two years of military training and physical education, are required for graduation. While students are no longer required to complete a teaching minor, according to the state laws of Illinois, those students desiring a second teaching field must select it from the teacher education minors listed on page 255.

By completing the physical science requirements and the minimum number of hours required in the biological sciences, a student in this curriculum will meet the state requirements of a minor in general science.

For teacher education requirements applicable to all curricula, see pages 251–256.

FIRST YEAR		HOURS
Chemistry		8
Chem. 101—General Chemistry	4	
Chem. 102—General Chemistry	4	
Students with sufficient background and ability in chemistry are urged to take Chemistry 107 and 108 and follow this with Chemistry 131 and 134.		
Foreign Language[1]		8
Rhetoric and Speech		8 or 9
Speech 111—Verbal Communication	4	
Speech 112—Verbal Communication	4	
or		
Rhet. 101—Freshman Rhetoric and Composition	3	
Rhet. 102—Freshman Rhetoric and Composition	3	
Speech 101—Principles of Effective Speaking	3	
Psychology[2]		4
Psych. 100—Introduction to Psychology	4	
or		
Psych. 103—Introduction to Experimental Psychology	4	
Mathematics		2 or 3
Math. 104—Elements of Algebra and Trigonometry	3	
or		
Math. 114—Plane Trigonometry	2	
Students entering the University with a minimum of three years of high school mathematics, part of which is trigonometry, are exempt from the mathematics requirements. Mathematics through trigonometry are required for physics taken in the second year. Students exempted from this requirement will have an additional two or three hours of electives.		
Physical Education		2
Minimum Hours for First Year		32 to 34

SECOND YEAR		HOURS
Biological Sciences		10
Biol. 110—Principles of Biology, I	5	
Biol. 111—Principles of Biology, II	5	
Chem. 131—Elementary Organic Chemistry		3
Chem. 134—Elementary Organic Chemistry Laboratory		2
Physics		10
Physics 101—General Physics (Mechanics, Heat, and Sound)	5	
Physics 102—General Physics (Light, Electricity and Magnetism)	5	
Humanities[3]		3 or 4
Pol. Sci. 150—American Government: Organization and Powers[2,6]		3
Hist. Phil. Ed. 201—Foundations of American Education		2
Physical Education		2
Minimum Hours for Second Year		35 or 36

THIRD YEAR		
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects[4]		2
Humanities[3]		3 or 4
Biol. 210—Genetics		4
Physiology (select one of the following)		5 or 6
Bot. 330—Plant Physiology (3) and Bot. 335—Plant Physiology Laboratory (3)	6	
Physiol. 203—Human Physiology for Selected Students	5	
Physiol. 301—General Physiology (3) and Physiol. 303—General Physiology Laboratory (2)	5	
Physiol. 302—Experimental Animal Physiology (3) and Physiol. 304—Experimental Physiology Laboratory (2)	5	
Invertebrate Zoology (select one of the following)		3 to 5
Entom. 301—Introduction to Entomology	5	
Entom. 312—Entomology for Teachers	3	
Zool. 304—Field and Systematic Zoology	5	
Zool. 318—Protozoology	5	
Zool. 320—Invertebrate Zoology	5	
Zool. 321—Parasitology	5	
Zool. 343—Limnology	5	
Vertebrate Zoology (select one of the following)		3 to 5
Zool. 232—Comparative Vertebrate Anatomy[5]	5	
Zool. 335—Ornithology	3	
Zool. 340—Natural History of the Vertebrates	5	
Microbiol. 200—Microbiology, and Microbiol. 201—Experimental Microbiology		5
Botany (select one of the following)		3 to 6
Bot. 260—Introductory Plant Toxonomy	3	
Bot. 304—General Plant Morphology	4	
Bot. 305—Comparative Morphology—Embryophytes	4	
Bot. 345—Plant Anatomy	4	
Bot. 366—Field Botany	3 or 5	
Minimum Hours for Third Year		28 to 36

FOURTH YEAR

FIRST SEMESTER	**HOURS**
Ecology (select one of the following)	3 to 5
Bot. 381—Plant Ecology	5
Zool. 345—Animal Ecology	4 or 5
Zool. 342—Wildlife Management and Conservation	3
Statistics (select one of the following)	3 or 4
Agron. 340—An Introduction to Applied Statistics	4
Biol. 371—Quantitative Biology	4
Ed. Psych. 390—Elements of Educational Statistics	3
Math. 161—Statistics	3
Psych. 235—Statistical Methods in Psychological Research	4
Electives	10 to 12
The following courses are suggested as possible electives that might not otherwise be considered:	
Anth. 102—Introduction to Anthropology: The Origin of Man and Culture	4
Anth. 240—Introduction to Biological Anthropology	3
Anth. 343—Introduction to Primate Morphology and Behavior	3
Astron. 210—General Astronomy	3
Geog. 102—Physical Geography, I	4
Geog. 214—Conservation of Natural Resources	3
Geog. 314—Regional Problems in Conservation of Natural Resources	3
Geol. 101—Physical Geology	4
Geol. 102—Historical Geology	4
Hist. 347—The Emergence of Modern Science to the Age of Newton	3
Hist. 348—The History of Modern Science Since the Age of Newton	3
Phil. 327—Philosophy of Science: Advanced Survey	3
Phil. 328—Philosophy of Science	3
In addition to this brief listing, any course offered by any of the science departments may be considered as acceptable electives in the teacher education curriculum in the biological sciences.	
Regarding physical science studies, Illinois regulations require a minimum of twenty-four hours in the physical sciences for a teacher working on that area. Adding one hour of physical science to the twenty-three hours of chemistry and physics required in the teacher education curriculum in the biological sciences will thus satisfy the minimum requirement for a physical science teacher in Illinois.	
Minimum Hours for First Semester	16 to 21

SECOND SEMESTER (PROFESSIONAL SEMESTER)	**HOURS**
Education	14
Ed. Prac. 242—Educational Practice in Secondary Education	5
Ed. Psych. 211—Educational Psychology	3
Sec. Ed. 240—Principles of Secondary Education	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	4
Hist. 261—The First Century of the American Republic[2,6]	
or	
Hist. 262—The United States: World Power in an Industrial Age Since 1877[2,6]	3
Ed. Prac. 250—School and Community Experiences	2
The professional semester may be taken during the fall or spring of the senior year. In either case, registration in Ed. Prac. 250 should be during the fall semester of the year during which student teaching occurs, as this is the only time requirements for this particular course can be fulfilled, i.e., two weeks prior to the beginning of the fall semester.	
Minimum Hours for Second Semester	19

NOTES

[1] The foreign language requirement must be satisfied by completion of one of the methods mentioned on page 363.

[2] Political Science 150, History 151 or 152 or 261 or 262, and Psychology 100 or 103 fulfill the College of Liberal Arts and Sciences social science requirements.

[3] The humanities requirement may be satisfied by a minor in the humanities (including foreign

language literature courses) or by completion of one of the approved sequences in the humanities listed under the general education sequences on page 364.

[4] It is preferred that Secondary Education 101 be spaced one or two semesters away from the professional semester.

[5] Zoology 232, Comparative Vertebrate Anatomy is a prerequisite to all of the following courses in vertebrate zoology: 332, 333, 336, 337, 338.

[6] All teacher education curricula must include one course in United States history and one course in political science which covers both Illinois and Federal Constitutions. One course in history and one course in political science selected from the following will fulfill these requirements: History 151, 152, 260, 261, 262, and Political Science 150, or 191.

[7] Microbiology 201 may be taken for three to five hours' credit. The minimum required for teacher education is three hours. Students with particular interest in microbiology may take additional hours.

Teacher Education Minor in Biology

Biol. 110—Principles of Biology, I	5
Biol. 111—Principles of Biology, II	5
Biol. 210—Genetics	4
Electives to be taken in the Life Science areas	12
Total	26

Twelve hours of electives are to be chosen from the various departments in the School of Life Sciences, in consultation with the adviser. An attempt should be made to obtain background in each of the general areas in the School of Life Sciences to give the students minoring in the teaching of biological sciences as much breadth as possible as prospective biology teachers.

Teacher Education Minor in General Science

	HOURS
Physics 101—General Physics	5
Physics 102—General Physics	5
Biol. 110—Principles of Biology	5
Biol. 111—Principles of Biology	5
Chem. 101—General Chemistry	4
Chem. 102—General Chemistry	4
Total	28

Additional hours in other sciences such as astronomy, geology, and physical geography are recommended for the student completing the minor in general science.

Curriculum Preparatory to the Teaching of Chemistry

For the Degree of Bachelor of Science in the Teaching of Chemistry

For students preparing to teach physical science with a major in chemistry and a minor in physics or mathematics.

This curriculum is designed to prepare the student for the teaching profession while providing him with a particularly strong background in chemistry and in mathematics or physics. It is not intended to provide preparation for industrial chemistry or chemical research.

A minimum of 125 hours of credit, excluding military science and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

Minors. *Either* a minor in mathematics (two advanced mathematics courses beyond calculus) or a minor in physics (two advanced physics courses beyond Physics 108).

The sequence of chemistry courses chosen by the student is somewhat flexible and depend upon previous educational experience as well as other factors. The following two

sequences of chemistry courses are recommended. The first is the less rigorous program and might be followed by a student whose high school background is not particularly strong. The second is similar to that followed by students in the chemistry curriculum. A program intermediate between these two, or involving other courses, may be chosen with the consent of the departmental adviser, but, in all cases, the course program should include a course in physical chemistry (Chemistry 340, 341 or Chemistry 342 and 344), and two additional courses at the 300 level. Biochemistry 350 and 355 are strongly recommended.

FIRST SEQUENCE	HOURS
Chem. 101—General Chemistry	4
Chem. 102—General Chemistry	4
Chem. 122—Elementary Quantitative Analysis	5
Chem. 136—Basic Organic Chemistry and Chem. 181—Structure and Synthesis	5
Chem. 340, 341—Physical Chemistry	5
Additional Chemistry	9
Total	32

SECOND SEQUENCE	HOURS
Chem. 107—General Chemistry	5
Chem. 108—General Chemistry	5
Chem. 136—Organic Chemistry	3
Chem. 181—Structure and Synthesis	2
Chem. 315—Inorganic Chemistry	3
Chem. 336—Organic Chemistry	3
Chem. 342—Physical Chemistry	3
Chem. 344—Physical Chemistry	3
Chem. 383—Dynamics, Structure, and Physical Methods	2
Additional Chemistry	3
Total	32

Students may elect to minor in either mathematics or physics. The minimum requirement for the mathematics minor is at least six semester hours of work beyond a full year of calculus and at the 300 level.

A teacher education minor in physics requires an additional six hours of physics beyond the 106, 107, 108 sequence. Among the acceptable courses for the physics minor are Physics 381, 341, or 371. This should include at least one 300-level course, and generally requires that at least one mathematics course beyond the calculus be taken as prerequisite.

Regardless of the minor, the curriculum requires the completion of the Physics 106, 107, 108 sequence and one year of calculus.

A minimum of four hours of biological science and six hours of humanities are required in addition to courses required for teacher certification.

TYPICAL FOUR-YEAR PROGRAM

FIRST YEAR FIRST SEMESTER	17 TO 19 HOURS	SECOND SEMESTER	17 TO 19 HOURS
Chem. 101—General Chemistry, or Chem. 107[1]	4 or 5	Chem. 108—General Chemistry, or Chem. 102—General Chemistry	5 or 4
Foreign Language[2]	4	Foreign Language	4
Mathematics	5	Mathematics	5
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication[3]	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication[3]	3 or 4
Physical Education	1	Physical Education	1

SECOND YEAR	18 OR 16 HOURS		18 OR 20 HOURS
Chem. 136—Basic Organic Chemistry and Chem. 181—Structure and Synthesis, or Chem. 122—Elementary Quantitative Analysis	5	Chemistry[6]	5
Math. 130—Calculus and Analytic Geometry (5), or Math. 131—Calculus and Analytic Geometry (3)[4]	5 or 3	Math. 140—Calculus and Analytic Geometry (3), or Math. 141—Calculus and Analytic Geometry (5)[4]	3 or 5
Physics 106—General Physics (Mechanics)	4	Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Humanities Elective[5]	3	Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2
Physical Education	1	Speech 101—Principles of Effective Speaking[3]	3
		Physical Education	1

THIRD YEAR	16 HOURS		15 TO 17 HOURS
Chemistry	5	Biological Science[8]	4
Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4	Chemistry	3 to 5
Pol. Sci. 150—American Government: Organization and Powers[7]	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4	Mathematics or Physics for minor	3
		Humanities Elective	3

FOURTH YEAR	13 HOURS		17 TO 19 HOURS
Chemistry Electives	6	Ed. Prac. 242—Educational Practice in Secondary Education	5
Mathematics or Physics for minor	3	Ed. Prac. 250—School and Community Experiences (Optional)	2
Other Electives	4	Ed. Psych. 211—Educational Psychology	3
		Hist. 262—The United States: World Power in an Industrial Age Since 1877[7]	3
		Sec. Ed. 240—Principles of Secondary Education	2
		Sec. Ed. 241—Technic of Teaching in the Secondary School	4

NOTES

[1] Chemistry 107 requires at least concurrent registration in analytic geometry.

[2] If a student does not continue in the University the same language which he began in high school, it will be necessary for him to take two years of foreign language rather than the one year specified above. The language requirement must be met from among the French, German, or Russian languages.

[3] Students who take Speech 111 and 112 are not required to take Speech 101.

[4] Students enrolling in Mathematics 131 should plan to enroll in Mathematics 141 during the second year, second semester. Those choosing to enroll in Mathematics 130 must plan to enroll in Mathematics 140 during the second year, second semester. Students with the requisite score on the required placement examination may enroll in Mathematics 135 and 145.

[5] Humanities electives must be chosen to satisfy the University requirements for general education. The requirement for general education course work in social sciences and in natural sciences is satisfied by courses required in the curriculum.

[6] Refer to the sequences of chemistry courses listed on page 388.

[7] All teacher education curricula must include one course in United States history and one course in political science which covers both Illinois and federal constitutions. One course in history and one course in political science selected from the following will fulfill these requirements: History 151, 152, 260, 261, 262; and Political Science 150, or 191.

[8] Four hours of biological science are required. Suggested courses are Physiology 103, 203, 301; Microbiology 100 or 101; but other courses may be selected with the approval of the adviser.

Teacher Education Minor in Chemistry

	HOURS
Chem. 101 and 102—General Chemistry	8
Chem. 122—Elementary Quantitative Analysis	5
Chem. 131—Elementary Organic Chemistry	3
Chem. 134—Elementary Organic Chemistry Laboratory	2
Physical Science Electives (preferably physics)	8 to 10
Total	26 to 28

Teacher Education Minor in Physical Science

Twenty-four semester hours in the field with approximately one-half of the work in chemistry and the other half in physics. Additional work in other physical sciences, such as astronomy, geology, and physical geography, is recommended.

This minor appears under both the chemistry and physics curricula. It is a more flexible minor intended primarily for students preparing to teach mathematics.

Curriculum Preparatory to the Teaching of Earth Science

For the Degree of Bachelor of Science in the Teaching of Earth Science

This curriculum is designed for students preparing to teach earth science as their major area of specialization. Students in this curriculum are required to complete a teaching minor in biology, chemistry, general science, mathematics, or physical science.

The courses outlined below total 129 to 136 hours. The minimum number of hours in this curriculum is 125, excluding the first two years of military science and physical education. The college requirement of thirty hours of advanced courses must be met.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS	SECOND SEMESTER	16 OR 17 HOURS
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Foreign Language[1]	4	Foreign Language[1]	4
Geol. 101—Physical Geology	4	Geol. 102—Historical Geology	4
Chem. 101—General Chemistry	4	Teaching Minor	4
Physical Education	1	Physical Education	1

SECOND YEAR

FIRST SEMESTER	14 TO 17 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Mathematics[2]	2 to 5	Geol. 115—Regional Field Study[3]	2
Psych. 100—Introduction to Psychology	4	Geol. 233—Minerals and Rocks	4
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Political Science[4]	3 or 4
Biol. 110—Principles of Biology	5	Teaching Minor	4
Physical Education	1	Speech 101—Principles of Effective Speaking[5]	3
		Physical Educotion	1

THIRD YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Geol. 222—Paleontology and Stratigraphy	4	Geog. 102—Physical Geography	4
Humanities Elective	3	United States History[4]	3 to 4
Physics 101—General Physics (Mechanics, Heat and Sound)	5	Humanities Elective	3
Elective[6]	4	Teaching Minor	4
		Elective[6]	3

FOURTH YEAR[7]	17 HOURS		16 HOURS
Astron. 210—General Astronomy[8]	3	Ed. Prac. 250—School and Community Experiences[9]	2
Hist. Phil. Ed. 201—Foundations of American Education	2	Ed. Psych. 211—Educational Psychology	3
Elective[6]	12	Sec. Ed. 240—Principles of Secondary Education	2
		Sec. Ed. 241—Technic of Teaching in the Secondary School	4
		Ed. Prac. 242—Educational Practice in Secondary Education	5

NOTES

[1] The language requirement is a reading knowledge of German, French, or Russian. See the sciences and letters curriculum, foreign language requirements (page 363), for ways in which this requirement may be satisfied.
[2] Mathematics through trigonometry (Mathematics 114) is required. Mathematics 120, Calculus and Analytic Geometry, is recommended for all students.
[3] Geology 215, Field Geology, may be substituted for Geology 115, Regional Field Study.
[4] All teacher education curricula must include one course in United States History and one course in political science which covers both Illinois and federal constitutions. One course in history and one course in political science selected from the following will fulfill these requirements: History 151, 152, 260, 261, 262, and Political Science 150 or 191.
[5] Students who take Speech 111 and 112 are not required to take Speech 101.
[6] A minimum of eight additional hours in earth science is required. Recommended courses are Agronomy 101, Introductory Soils; Geology 370, Oceanography; Geography 201, Advanced Physical Geography; or Geology 301, Geomorphology; and other appropriate advanced courses in agronomy, astronomy, geology, and geography.
[7] The second semester program can be interchanged with that of the first semester of the fourth year.
[8] Students who do not take a year of physics should take Astronomy 101 and 102, Descriptive Astronomy.
[9] Recommended but not required.

Teaching Minors

Students in this curriculum are required to complete one of the following teaching minors:

Biology (see the teacher education minor in biology on page 387).
Chemistry (see the teacher education minor in chemistry on page 390).
General Science (see the teacher education minor in general science on page 387).
Mathematics (see the teacher education minor in mathematics on page 402).
Physical Science (see the teacher education minor in physical science on page 404).

Teacher Education Minor in Earth Science

Astron. 102–102—Descriptive Astronomy	8
Geog. 102—Physical Geography, I	4
Geol. 101–102—Physical Geology and Historical Geology	8
Geol. 115—Regional Field Study	2
Geol. 233—Minerals and Rocks	4
Total	26

Curriculum Preparatory to the Teaching of English

For the Degree of Bachelor of Arts in the Teaching of English

The courses outlined below total 128 to 138 semester hours, excluding the first two years of military training and physical education. A minimum of 128 hours, with these exclusions, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS
Rhetoric—University Requirement	6 to 8
Rhet. 101–102—Freshman Rhetoric and Composition, or the equivalent (six hours) or Speech 111–112—Verbal Communication (eight hours)	
Physical Education—University Requirement	4
General Education	14 to 17
Approved sequences are required in social science and either biological science or physical science; see the list of approved sequences under the sciences and letters curriculum in the College of Liberal Arts and Sciences.	
Social Science:	
Hist. 260—Colonial Beginnings and the American Revolutionary Era to 1789 (or History 262, 151, or 152)	3 or 4
Pol. Sci. 150—American Government: Organization and Powers, or Pol. Sci. 191—Principles of Political Science	3 or 4
Natural Science	8 or 9
Foreign Language	0 to 16
A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. (See foreign language requirement, page 363.)	
Education	22
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2
Hist. Phil. Ed. 201—Foundations of American Education	2
Ed. Psych. 211—Educational Psychology	3
Sec. Ed. 240—Principles of Secondary Education	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	5
Sec. Ed. 336—Fundamentals of Reading Techniques	3
Ed. Prac. 242—Educational Practice in Secondary Education	5
(Education 241, 242, and either 211 or 338 are taken concurrently.)	
Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4
Speech	3 or 6
Speech 101—Principles of Effective Speaking	3
(A student who elects Speech 111 and 112 is not required to take Speech 101.)	
Speech 141—Oral Interpretation	3
Teacher Education Major	at least 36
Option 1: Teacher Education Major in English	
Engl. 131—Introduction to Shakespeare	3
Engl. 255–256—Survey of American Literature, or equivalent	6
Engl. 257–258—Survey of English Literature, or equivalent	6
Engl. 215—Practical Criticism	3
Engl. 386—Modern English Grammar and Usage	3
Engl. 303—Historical Introduction to the English Language	3
Engl. 370—Theory and Practice of Written Composition	3
Engl. 310—Literature for the High School	3
English Electives	6
(Must be in courses restricted to advanced undergraduates.)	
Teacher education minor: To be elected from teacher education minors (see page 255) in any foreign language, history, journalism, library science, social studies, speech, or English as a second language.	
In lieu of a minor, a student may choose to work in supporting areas of concentration. See page 263 of this catalog. English 215, 303, 310, and 370, already required in this curriculum, may not be counted again for credit in the supporting areas.	
Option 2: Teacher Education Major in Literature	
(Available only with the teacher education minor in rhetoric or in English as a second language.)	
Two of the following courses	6
Engl. 101—Introduction to Poetry	
Engl. 102—Introduction to Drama	
Engl. 103—Introduction to Fiction	
Engl. 197—Sophomore Honors Seminar	
Engl. 131—Introduction to Shakespeare, or Engl. 231–232—Shakespeare	3 or 6
Engl. 215—Practical Criticism	3

Engl. 255–256—Survey of American Literoture, or equivalent..... 6
Engl. 257–258—Survey of English Literature, or equivalent..... 6
Advanced electives in English.....9 or 12

Teacher Education Minor in Rhetoric ..... at least 24

(Available only with the teacher education major in literature.)
Rhet. 101–102—Freshman Rhetoric and Composition, or the equivalent (six hours) or Speech 111–112—Verbal Communication.....6 to 8
Rhet. 133—Principles of Composition, or Rhet. 143—Intermediate Expository Writing..... 3
Rhet. 144—Narrative Writing..... 3
Engl. 386—Modern English Grammar and Usage..... 3
Electives in rhetoric or related fields.....7 to 9
Related fields include, for example, linguistics, journalism, advertising, communications, and speech. Electives must be chosen with the consent of the adviser.

Teacher Education Minor in English as a Second Language

Option 1..... 26 to 28
(Available only with a teacher education major in literature.)
Rhet. 101–102—Freshman Rhetoric and Composition, or the equivalent (six hours) or Speech 111–112—Verbal Communication (eight hours).....6 to 8
Rhet./Ling. 388–389—Linguistics in Language Learning, I and II..... 8
Ling. 300—Introduction to Linguistics, or Ling. 200—Elements of Linguistics.. 3
Rhet. 133—Principles of Composition, or Rhet. 143—Intermediate Expository Writing..... 3
Engl. 386s—Modern English Grammar and Usage..... 3
Ling./Anth./Comm. 370—Language, Culture, and Society, or Ling. 305—Introduction to Applied Linguistics..... 3

Option 2..... 26 to 28
(Available only with a teacher education major in a foreign language, speech, or social studies.)
Rhet. 101–102—Freshman Rhetoric and Composition, or the equivalent (six hours) or Speech 111–112—Verbal Communication (eight hours)....6 to 8
Rhet./Ling. 388–389—Linguistics in Language Learning, I and II..... 8
Ling. 300—Introduction to Linguistics, or Ling. 200—Elements of Linguistics 3
Rhet. 133—Principles of Composition, or Rhet. 143—Intermediate Expository Writing..... 3
Engl. 386s—Modern English Grammar and Usage..... 3
Engl. 116—Masterpieces of American Literature, or Engl. 256—Survey of American Literature, II..... 3
Additional courses in literature, especially British literature, and linguistics are recommended.

Option 3..... 26 to 28
(Available only with a teacher education major in English, including section "s" of Engl. 386—Modern English Grammar and Usage)
Rhet. 101–102—Freshman Rhetoric and Composition, or the equivalent (six hours) or Speech 111–112—Verbal Communication (eight hours)....6 to 8
Rhet./Ling. 388–389—Linguistics in Language Learning, I and II..... 8
Ling. 300—Introduction to Linguistics, or Ling. 200—Elements of Linguistics.. 3
Ling. 305—Introduction to Applied Linguistics, or Ling. 301—Introduction to General Phonetics or Speech 301—General Phonetics, or Speech 208—Speech and Hearing Problems in the Classroom..... 3
Speech 109—Introduction to Physiological Phonetics..... 3
Ling./Anth./Comm. 370—Language, Culture, and Society..... 3
Electives—As needed to total at least 128 hours, not counting the first two years of military training or physical education. (Recommended courses include Classical Civilization 111—Mythology of Greece and Rome; Philosophy 101—Introduction to Philosophy; Philosophy 110—World Religions; History 131 and 132—English History; Speech 203—Dramatics for Teachers; Humanities 363 or 364—Introduction to Comparative Literature; courses in foreign literatures.)

Teacher Education Minor in English

	HOURS
Two courses in American literature	6
Two courses in English literature	6
Engl. 215—Practical Criticism, or Rhet. 133—Principles of Composition, or Rhet. 143—Expository Writing	3
Engl. 386—Modern English Grammar and Usage	3
English or American Literature, or Rhetoric	6
Total	24

Curriculum Preparatory to the Teaching of French

For the Degree of Bachelor of Arts in the Teaching of French

A minimum of 120 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

		HOURS
Education		at least 18
Ed. Prac. 242—Educational Practice in Secondary Education (Ed. Prac. 242, Ed. Psych. 211, and Sec. Ed. 241 are to be taken concurrently.)	5	
Ed. Prac. 250—School and Community Experiences (This course may be omitted if eighteen hours in education are secured otherwise.)	2	
Ed. Psych. 211—Educational Psychology	3	
Hist. Phil. Ed. 201—Foundations of American Education	2	
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	
Sec. Ed. 240—Principles of Secondary Education	2	
Sec. Ed. 241—Technic of Teaching in the Secondary School	4	
General Education		16
Approved sequences are required in social science and either biological science or physical science; see the list under the sciences and letters curriculum in the College of Liberal Arts and Sciences.		
History		3 or 4
Hist. 151—History of the United States to 1865	4	
Hist. 152—History of the United States, 1865 to the Present	4	
Hist. 261—The First Century of the American Republic	3	
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3	
Physical Education		4
Pol. Sci. 150—American Government: Organization and Powers		3
Psych. 100—Introduction to Psychology		4
Rhetoric and Speech		8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking, or Speech 141—Oral Interpretation	9	
or Speech 111–112—Verbal Communication	8	
Teachers' Major in French		38
French 101–102—Elementary Course	8	
French 103–104—Modern French	8	
French 201–202—Introduction to French Literature	6	
French 211–212—Oral French	6	
French 213–214—Composition	4	
French 217—Advanced Oral French	4	
French 282—Teachers' Course	2	
Teachers' Minor		at least 20
Desirable teaching combinations with French include English, foreign languages, history, and music. A double major in French and English and a double major in French and Latin with English or history as a minor subject are also recommended. Additional hours toward certification may be gained from basic courses credited from a secondary school.		

Electives. Advanced courses in French civilization and literature are recommended, particularly for students who have completed basic French courses in secondary school. Other courses in language and literature, geography, history, philosophy, art, and music are also recommended.	17 or 16
Total	at least 120

Specialty for Teaching French in Both High School and Elementary School

This specialty offers preparation for those who wish to teach foreign language and another subject in a high school or foreign language only in an elementary school under Illinois teacher certification regulations. Completion of the curriculum described above will qualify the student for the high school certificate which permits him to teach French in grades six through twelve. A student who wishes to prepare for teaching French in the elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the "Teachers' Minor" required in the above curriculum:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers	3
El. Ed. 233—Classroom Programs in Childhood Education	2
El. Ed. 333—The Teaching of Language Arts in the Elementary School	3
El. Ed. 336—Primary Reading	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, the student will be entitled to the special certificate, which will permit him to teach French in all grades of the public schools, as well as to the high school certificate. The special certificate does not qualify him to teach any elementary school subjects other than the one named on the certificate.

The student may complete a "Teachers' Minor" mentioned above, if he wishes, but additional hours will be required.

Teacher Education Minor in French

The minor in French requires six hours of oral work supplementary to French 101, 102, 103, and 104. Total hours required may be reduced by entrance credits in French. Additional courses recommended are French 201, 202, 203, 213, 214, 217, and 282.

	HOURS
French 101–102—Elementary Course	8
French 103–104—Modern French	8
French 211–212—Oral French	6
Total	22

Curriculum Preparatory to the Teaching of Geography

For the Degree of Bachelor of Science in the Teaching of Geography

The courses outlined below total 126 to 130 hours. A minimum of 123 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

Students are required to complete one teaching minor. It is strongly recommended that the minor supplement the nature of the major. A major that is directed toward physical geography should select a minor from biology or geology, whereas a major directed toward cultural geography should select a minor from the social sciences. However, the combining of a physical geography major with a social studies minor or a cultural geography major with a physical science minor is advantageous for candidates expecting to teach in small high schools. For those whose major is directed toward regional geog-

raphy, a minor in foreign language, especially the language of the major region of specialization, is recommended. A minor in economics is another possibility.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR FIRST SEMESTER	15 HOURS	SECOND SEMESTER	16 HOURS
Foreign Language[1]	4	Foreign Language[1]	4
Geog. 103—Physical Geography, II[2]	4	Geog. 104—World Regional Geography	4
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Physical Education	1	Physical Education	1
Electives	3	Electives	4
SECOND YEAR	**16 HOURS**		**16 HOURS**
Geography	3	Geography	3
Psych. 100—Introduction to Psychology	4	Physical Education	1
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Electives	12
Speech 101—Principles of Effective Speaking	3		
Physical Education	1		
Electives	3		
THIRD YEAR	**16 HOURS**		**17 HOURS**
Geography	4	Geography	6
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3	Pol. Sci. 150—American Government: Organization and Powers	3
Hist. Phil. Ed. 201—Foundations of American Education	2	Electives	8
Sec. Ed. 240—Principles of Secondary Education	2		
Electives	5		
FOURTH YEAR	**13 HOURS**		**17 HOURS**
Ed. Prac. 242—Educational Practice in Secondary Education	5	Geography	6
Ed. Psych. 211—Educational Psychology	3	Geog. 371—Introduction to Research, I.	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	5	Electives	9

NOTES

[1] A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. (See foreign language requirement, page 363.)

[2] Of the thirty-two hours of geography required for certification, ten hours must consist of Geography 103, 104, and 371. The remaining twenty-two hours may be selected by permission of the adviser from the course offerings of the Department of Geography, including in the selection at least one course from each of the following: physical geography; economic, social, or political geography; regional geography; and geographic techniques.

Teacher Education Minor in Geography

	HOURS
Geog. 103—Physical Geography, II	4
Geog. 104—World Regional Geography	4
Geog. 371—Introduction to Research	2
Geography (regional courses)	8
Physical Science (geology, astronomy, physical geography)	6
Total	24

Curriculum Preparatory to the Teaching of German

For the Degree of Bachelor of Arts in the Teaching of German

A minimum of 120 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS
Education	at least 18
Ed. Prac. 242—Educational Practice in Secondary Education (Ed. Prac. 242, Ed. Psych. 211, and Sec. Ed. 241 are to be taken concurrently.)	5
Ed. Prac. 250—School and Community Experiences (This course may be omitted if eighteen hours in education are secured otherwise.)	2
Ed. Psych. 211—Educational Psychology	3
Hist. Phil. Ed. 201—Foundations of American Education	2
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2
Sec. Ed. 240—Principles of Secondary Education	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	4
General Education	16
Approved sequences are required in social science and either biological science or physical science; see list under the sciences and letters curriculum in the College of Liberal Arts and Sciences.	
History	3 or 4
Hist. 151—History of the United States to 1865	4
Hist. 152—History of the United States, 1865 to the Present	4
Hist. 261—The First Century of the American Republic	3
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3
Physical Education	4
Pol. Sci. 150—American Government: Organization and Powers	3
Psych. 100—Introduction to Psychology	4
Rhetoric and Speech	8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking, or Speech 141—Oral Interpretation	9
or Speech 111–112—Verbal Communication	8
Teachers' Major in German	45
German 101–102—Elementary Course	8
German 103—Intermediate Course	4
German 104—Intermediate Course	4
German 210—Masterpieces of German Literature	3
German 211–212—Conversation and Writing	6
German 250—The German Novelle of the 19th Century, German 251—The German Novelle of the 20th Century, German 252—19th Century German Drama, German 253—20th Century German Drama, or German 260—Lyrics and Ballads	3
German 281—Teachers' Course	3
German 303—Advanced Conversation, Composition, and Syntax	3
German 304—Advanced Conversation	1
German 320—History of German Civilization	4
German 365—German Phonology and Morphology	3
German Elective	3
Teachers' Minor	at least 20
Desirable teaching combinations with German include English, French, history, Latin, music, physical education, Russian, or Spanish. A double major in German and English with Latin or history as a minor is also recommended.	
Electives	8 to 11
Recommended electives are Art 111, 112, Humanities 363, 364, Music 110, Philosophy 101, German 113, advanced German courses not included in the minimum program, and other language and literature courses.	
Total	at least 120

Specialty for Teaching German in Both High School and Elementary School

This specialty offers preparation for those who wish to teach foreign language and another subject in a high school or foreign language only in an elementary school under Illinois teacher certification regulations. Completion of the curriculum described above will qualify the student for the high school certificate which permits him to teach German in grades six through twelve. A student who wishes to prepare for teaching German in the elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the "Teachers' Minor" required in the above curriculum:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers	3
El. Ed. 233—Classroom Programs in Childhood Education	2
El. Ed. 333—The Teaching of Language Arts in the Elementary School	3
El. Ed. 336—Primary Reading	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, the student will be entitled to the special certificate. which will permit him to teach German in all grades of the public schools, as well as to the high school certificate. The special certificate does not qualify him to teach any elementary school subjects other than the one named on the certificate.

The student may complete a "Teachers' Minor" mentioned above, if he wishes, but additional hours will be required.

Teacher Education Minor in German

	HOURS
German 101–102—Elementary Course	8
German 103—Intermediate Course	4
German 104—Intermediate Course	4
German 211—Conversation and Writing	3
German 212—Conversation and Writing	3
Total	22

Teacher Education Minor in Italian

	HOURS
Italian 101–102—Elementary Italian	8
Italian 103–104—Intermediate Italian	8
Italian 211–212—Composition and Conversation, I and II	6
Total	22

Curriculum Preparatory to the Teaching of Latin

For the Degree of Bachelor of Arts in the Teaching of Latin

A minimum of 120 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS
Education	at least 18
Ed. Prac. 242—Educational Practice in Secondary Education. 5	
(Ed. Prac. 242, Ed. Psych. 211, and Sec. Ed. 241 are to be taken concurrently.)	
Ed. Prac. 250—School and Community Experiences. 2	
(This course may be omitted if eighteen hours in education are secured otherwise.)	
Ed. Psych. 211—Educational Psychology. 3	
Hist. Phil. Ed. 201—Foundations of American Education. 2	
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects. 2	
Sec. Ed. 240—Principles of Secondary Education. 2	
Sec. Ed. 241—Technic of Teaching in the Secondary School. 4	
General Education	15 or 16
Approved sequences are required in social science and either biological science or physical science; see the list under the sciences and letters curriculum in the College of Liberal Arts and Sciences.	
Social Science:	
Hist. 152—History of the United States, 1865 to the Present. 4	
Pol. Sci. 150—American Government: Organization and Powers. 3	
Natural Science. 8 or 9	
Physical Education	4
Psych. 100—Introduction to Psychology	4
Rhetoric and Speech	8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking, or Speech 141—Oral interpretation. 9	
or Speech 111–112—Verbal Communication. 8	
Teachers' Major in Latin	48–51
Courses in the Latin Language. 42	
Latin 101–102—Elementary Latin. 8	
Latin 103—Intermediate Latin. 4	
Latin 104–105—Virgil. 8	
Latin 113–114—Latin Composition. 4	
Latin 201–202—Survey of Latin Literature. 6	
Latin 203–204—Literature of the Republic and of the Empire. 6	
Latin 280—Teachers' Course. 2	
Latin 311–312—Advanced Latin Composition. 4	
The total of forty hours may be reduced by as much as sixteen hours through prerequisite credit for work equivalent to Latin 101–105 taken in secondary school. Students who at entrance are admitted to Latin 201 are required, however, to take Classical Civilization 301–302.	
Courses in Roman Civilization. 6–9	
Hist. 181–182—The Ancient World. 6	
or, if ancient history has been studied in secondary school, Hist. 383—History of the Roman Republic to 44 B.C. 3	
Cl. Civ. 362—The Archaeology of Italy. 3	
Teachers' Minor	at least 22
Desirable teaching combinations with Latin include a minor (or second major) in English, French, German, Russian, Spanish, or social studies.	
Electives	at least 7
Recommended electives are Classical Civilization 111, 301, 302, 361; Greek 101, 102; Latin 391; History 384; Linguistics 300, 302; and Philosophy 303.	
Total	at least 120

Specialty for Teaching Latin in Both High School and Elementary School

This specialty offers preparation for those who wish to teach foreign language and another subject in a high school or foreign language only in an elementary school under Illinois teacher certification regulations. Completion of the curriculum described above will qualify the student for the high school certificate which permits him to teach Latin in grades six through twelve. A student who wishes to prepare for teaching Latin in the

elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the "Teachers' Minor" required in the above curriculum:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers	3
El. Ed. 233—Classroom Programs in Childhood Education	2
El. Ed. 333—The Teaching of Language Arts in the Elementary School	3
El. Ed. 336—Primary Reading	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, the student will be entitled to the special certificate, which will permit him to teach Latin in all grades of the public schools, as well as to the high school certificate. The special certificate does not qualify him to teach any elementary school subjects other than the one named on the certificate.

The student may complete a "Teachers' Minor" mentioned above, if he wishes, but additional hours will be required.

Teacher Education Minor in Latin

	HOURS
Latin 101–102—Elementary Latin	8
Latin 103—Intermediate Latin	4
Latin 104–105—Virgil	8
Latin 113–114—Latin Composition	4
Latin 201–202—Survey of Latin Literature	6
Latin 280—Teachers' Course	2
Total	32

The total of thirty-two hours may be reduced as much as sixteen hours through prerequisite credit for work equivalent to Latin 101-105 taken in secondary school. Students who at entrance are admitted to Latin 201 are required, however, to take one semester of Latin 391 in addition to Latin 201-202.

Curriculum Preparatory to the Teaching of Mathematics

For the Degree of Bachelor of Science in the Teaching of Mathematics

This curriculum offers training for teachers of high school and junior college courses in beginning and advanced algebra, general mathematics, plane and solid geometry, trigonometry, and college algebra.

The courses outlined below total 124 to 133 hours. A minimum of 120 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

Although a teaching minor is not required for certification in Illinois, many schools, especially smaller schools, may employ only those who are qualified to teach in two subject areas. In addition, those who plan to teach in other states may be well advised to complete a teacher education minor. Recommended teaching minor areas include biology, general science, chemistry, physics, physical science, English, social studies, physical education, accountancy, economics education, French, German, Latin, Russian, and Spanish.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS	SECOND SEMESTER	14 TO 17 HOURS
Foreign Language[1]	4	Foreign Language[1]	4
Math. 120—Calculus and Analytic Geometry[2]	5	Math. 130—Calculus and Analytic Geometry, or Math. 131—Calculus and Analytic Geometry[4]	5 or 3
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Speech 101—Principles of Effective Speaking[3]	3	Physical Education	1
Physical Education	1	Electives	3

SECOND YEAR	14 TO 17 HOURS		16 OR 17 HOURS
Physical Science[5] or Humanities[6]	4 or 5	Physical Science[5]	4 or 5
Math. 140—Calculus and Analytic Geometry, or Math. 141—Calculus and Analytic Geometry[4]	3 or 5	Humanities[6]	4
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Psych. 100—Introduction to Psychology or Electives[7]	4
Physical Education	1	Math 315—Linear Transformations and Matrices	3
		Physical Education	1

THIRD YEAR	16 OR 17 HOURS		16 HOURS
American History[9]	3 or 4	Math. 302—Topics on Geometry	3
Math. 306—Selected Mathematical Topics for Secondary School Teachers, I	3	Math. 317—Introduction to Abstract Algebra	3
C.S. 107—Introduction to Digital Computing for Secondary School Teachers	3	Biological Science[9]	4
Biological Science 9	4	Pol. Sci. 150—American Government: Organization and Powers	3
Electives	3	Electives	3

FOURTH YEAR	16 HOURS		16 HOURS
Hist. Phil. Ed. 201—Foundations of American Education	2	Ed. Prac. 242—Educational Practice in Secondary Education	5
Math. 303—Advanced Aspects of Euclidean Geometry	3	Ed. Psych. 211—Educational Psychology	3
Math. 343—Advanced Calculus	3	Math. 305—Teachers' Course	3
Sec. Ed. 240—Principles of Secondary Education	2	Sec. Ed. 241—Technic of Teaching in the Secondary School	5
Electives	6		

NOTES

[1] The foreign language requirement may be satisfied by completion of one of the methods mentioned on page 363.

[2] Admission to calculus and analytic geometry normally requires a passing grade on the Mathematics Placement Test. A student ineligible for calculus and analytic geometry may be admitted to the curriculum with deficiencies and should enroll in algebra (Mathematics 111 or 112) and trigonometry (Mathematics 114) during the first semester.

[3] A student who elects Speech 111 and 112 is not required to take Speech 101. He may take a three-hour elective.

[4] Students enrolling in Mathematics 131 should plan to enroll in Mathematics 141 during the second year, second semester. Those choosing to enroll in Mathematics 130 must plan to register in Mathematics 140 during the second year, first semester.

[5] The physical science requirement may be satisfied by a minor in chemistry, physics, or physical science or by any one of the following sequences: Liberal Arts and Sciences 141 and 142; Physics 101 and 102; Physics 106 and 107.

[6] The humanities requirement may be satisfied by a minor in the humanities (including foreign language) or by completion of one of the approved sequences in the humanities listed under the general education sequences on page 364.

[7] Students whose minor teaching subject is not general science or biology and who elect Physiology

103 and Psychology 103 as their biological science will have satisfied the prerequisite for Educational Psychology 211 and are excused from Psychology 100. Students whose minor teaching subject is either general science or biology are required to take Botany 100 and Zoology and consequently must take Psychology 100.

[8] The requirement in American history may be satisfied by completion of one of the following courses: History 151, 152, 261, or 262.

[9] The biological science requirement may be satisfied by a minor in biology or completion of one of the approved sequences in biological science listed under the general education sequences on page 364.

Teacher Education Minor in Mathematics

	HOURS
Math. 120—Calculus and Analytic Geometry[1]	5
Math. 130 and 140—Calculus and Analytic Geometry, or Math. 131 and 141—Calculus and Analytic Geometry	8
Math. 302—Topics on Geometry	3
Math. 306—Selected Mathematical Topics for Secondary School Teachers, I	3
Elective (Math. 303, 307, 315, 317, 318, 343, 347, or a three-hour course in computer science)	3
Total	22

NOTES

[1] Admission to calculus and analytic geometry normally requires a passing grade on the Mathematics Placement Test. A student ineligible for calculus and analytic geometry may be admitted to the curriculum with deficiencies and should enroll in algebra (Mathematics 111 or 112) and trigonometry (Mathematics 114) during the first semester.

Combined Sciences and Letters—Education Program for Mathematics Teachers

This program leads to the degree of Bachelor of Arts (or Bachelor of Science) with a major in mathematics. A student must maintain a 4.0 average in mathematics and a 3.75 all-University average to remain in the program. All requirements for the sciences and letters curriculum must be met.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

In addition, the following courses are required:

Physics 106, 107; Secondary Education 101, 240, 241; Educational Psychology 211; History and Philosophy of Education 201; Educational Practice 242; Political Science 150; Psychology 100 or 103; three hours of United States history; Speech.

Each candidate must complete a major in mathematics which consists of the following:

Mathematics 120, 130 and 140 or 131 and 141, 300, 302, 305, 306, 317, 318, 343, and at least two courses from Mathematics 327, 347, 353, 354. Recommended electives are Mathematics 303 and 307.

Each candidate must complete a minor consisting of twenty hours in one or two of the following subjects with at least eight hours in each if two are chosen:

Accountancy, astronomy, biology, chemistry, economics, English, finance, foreign language, geography, history, philosophy, physics, political science, psychology, sociology.

In particular, the requirement for a minor can be satisfied by a teacher education minor as described on page 255 in one of the following fields.

Accountancy, biology, chemistry, economics education, foreign languages, physics, physical science, and social studies.

For information concerning courses in mathematics and requirements for graduation with distinction, candidates should apply to the Mathematics Honors Committee, 273 Altgeld Hall.

Curriculum Preparatory to the Teaching of Physics

For the Degree of Bachelor of Science in the Teaching of Physics

This program is for students preparing to teach physical science. A minimum of 126 hours of credit, not including physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR

FIRST SEMESTER	17 OR 18 HOURS	SECOND SEMESTER	17 OR 18 HOURS
Chem. 101—General Chemistry[1]	4	Chem. 102—General Chemistry	4
Foreign Language 103[2]	4	Foreign Language 104[2]	4
Math. 120—Calculus and Analytic Geometry[2]	5	Math. 130—Calculus and Analytic Geometry	5
Rhet. 101—Rhetoric and Composition, or Speech 111—Verbal Communication	3 or 4	Rhet. 102—Rhetoric and Composition, or Speech 112—Verbal Communication	3 or 4
Physical Education	1	Physical Education	1

SECOND YEAR

	17 HOURS		17 HOURS
Math. 140—Calculus and Analytic Geometry	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Physics 106—General Physics (Mechanics)	4	Math. 343—Advanced Calculus	3
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Physics 107—General Physics (Heat, Electricity, and Magnetism)	4
Speech 101—Principles of Effective Speaking[3]	3	Pol. Sci. 150—American Government: Organization and Powers[5]	3
Elective[4]	4	Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4
Physical Education	1	Physical Education	1

THIRD YEAR

	15 HOURS		16 OR 17 HOURS
Math. 345—Differential Equations and Orthogonal Functions	3	American History[5]	3 or 4
Physics 108—General Physics (Wave Motion, Sound, Light, and Modern Physics)	4	Physics 383—Atomic Physics and Quantum Theory	3
Humanities Elective[6]	3	Physics 341—Electricity and Magnetism	4
Electives[4]	5	Humanities Elective[6]	3
		Elective[4]	3

FOURTH YEAR

	17 HOURS		14 HOURS
Physics 303—Modern Experimental Physics, I	5	Ed. Prac. 242—Educational Practice in Secondary Education	5
Physics 371—Light	4	Ed. Psych. 211—Educational Psychology	3
Elective in Advanced Astronomy or Physics	3	Sec. Ed. 240—Principles of Secondary Education	2
Elective[4,7]	5	Sec. Ed. 241—Technic of Teaching in the Secondary School	4

NOTES

[1] Chemistry 107 and 108 (ten hours) may be substituted for Chemistry 101 and 102. Credit earned is counted toward the degree requirement of credit hours.

[2] A student may be admitted to the curriculum with the following deficiencies, but credit earned in them is not counted toward the degree: Mathematics 112, 114, Foreign Language 101, 102.

[3] Students who take Speech 111 and 112 are not required to take Speech 101.
[4] Electives may be used to meet the requirements of a teacher education minor in mathematics or in chemistry, or they may be used freely subject to the approval of the adviser. A sequence in biological science is recommended.
[5] All teacher education curricula must include one course in United States history and one course in political science which covers both Illinois and federal constitutions. One course in history and one course in political science selected from the following will fulfill these requirements: History 151, 152, 260, 261, 262, and Political Science 150 or 191.
[6] Humanities electives must be chosen from the Liberal Arts and Sciences general education sequences. The requirement for general education in social sciences and natural sciences is satisfied by the courses required in this curriculum.
[7] Ed. Prac. 250—School and Community Experiences, is recommended as an elective.

Teacher Education Minor in Physics

	HOURS
Physics 106, 107, 108—General Physics, and at least six hours of advanced courses	18
Chem. 101 and 102	8
Total	26

Teacher Education Minor in Physical Science

Twenty-four semester hours in the field with approximately half the work in chemistry and the other half in physics are required. Additional work in other physical sciences, such as astronomy, geology, and physical geography, and mathematics is recommended. It is a more flexible minor intended primarily for students preparing to teach mathematics, biology, and earth sciences. Students in the teacher education curriculum for mathematics can not use mathematics courses required in the major toward requirements in the minor in physical science.

Teacher Education Minor in Portuguese

	HOURS
Portuguese 101–102—Elementary Portuguese, I and II	8
Portuguese 103–104—Intermediate Portuguese	8
Portuguese 211—Intermediate Composition and Conversation	3
Portuguese 201—Introduction to Portuguese and Brazilian Literature OR	3
Portuguese 290—Readings in Portuguese	3
Total	22

Teacher Education Minor in Psychology

Below are the requirements for the teaching minor in psychology followed by courses which are commonly used to fulfill these requirements. This list is not meant to be exhaustive; and students may, using the framework provided, substitute other courses which may be more compatible with their specific background or goals. In such instances, however, the student should consult with an adviser to ascertain in which requirement area the course can be listed.

	HOURS
One Introductory Course:	
Psych. 100—Introduction to Psychology	4
Psych. 103—Introduction to Experimental Psychology	4
Psych. 105—Elements of Psychology	4
One Course in Statistics (minimum three hours):	
Psych. 135—Statistical Thinking in Psychology	3
Psych. 235—Statistical Methods in Psychological Research[1]	4
One Course from Personality-Development Area (minimum three hours):	
Psych. 216 Child Psychology[1]	3
Psych. 250 Psychology of Personality[1]	3
Psych. 338 Abnormal Psychology	3
One Survey Course in Experimental Psychology (minimum three hours):	
Psych. 211—Physiological Psychology	3
Psych. 230—Perception[1]	3
Psych. 248—Learning[1]	3
One Course in Social Psychology (minimum three hours):	
Psych. 201—Introduction to Social Psychology[1]	3
Psych. 245—Industrial Psychology	3
Two Additional Content Courses in Psychology	6 to 8
It is strongly recommended that one be a course in which laboratory experience in psychology can be obtained. The laboratory courses include Psychology 311, 330, 331,[1] 332, 345, 346, and 390.	
Additional courses of particular value are Psychology 348[1] and 360.[1]	
Minimum Total	22

NOTES

[1] Course is especially recommended.

Curriculum Preparatory to the Teaching of Russian

For the Degree of Bachelor of Arts in the Teaching of Russian

A minimum of 123 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

		HOURS
Teachers' Major in Russian		
Courses in Language and Literature		44
Russian 101–102—First-Year Russian, or Russian 111—Intensive First-Year Russian	8	
Russion 103–104—Second-Year Russion, or Russian 112—Intensive Second-Year Russian	8	
Russian 115 or 116—Russian Literature in Translation, I, II	3	
Russion 211–212—Oral Russian, I, II	4	
Russian 213–214—Russian Composition, I, II	4	
Russian 215–216—Introduction to Russian Literature, I, II	6	
Russian 280—Teachers' Course	2	
Russian 308—Russian Phonetics and Pronunciation	3	
Russian 326—Masterpieces of Russian Literature (or Russian 321, 322, 323, 324, 325—Readings in Russian Literature)	3	
Elective in Russian Language and Literature	3	
Russian History		3
Hist. 219—Survey of Russian History from Early Times to the Present (or History 319, 320, 321, 325, 326, 327, or 328)	3	
Rhetoric and Speech		8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking, or Speech 141—Oral Interpretation	9	
or Speech 111–112—Verbal Communication	8	

General Education Sequence Requirements		14 to 16
Social Science	6 or 7	
Pol. Sci. 150—American Government: Organization and Powers	3	
Hist. 152—History of the United States, 1865 to the Present; or Hist. 151, or 261 or 262	3 or 4	
Natural Science	8 or 9	
Biol. 100–101—Biological Science, or L.A.S. 141–142—Physical Science; or any approved sequence in biological or physical science as listed under the sciences and letters curriculum in the College of Liberal Arts and Sciences.		
Physical Education		(4)
Psych. 100—Introduction to Psychology		4
Education		at least 18
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	
Hist. Phil. Ed. 201—Foundations of American Education	2	
Sec. Ed. 240—Principles of Secondary Education	2	
Ed. Psych. 211—Educational Psychology	3	
Sec. Ed. 241—Technic of Teaching in the Secondary School	4	
Ed. Prac. 242—Educational Practice in Secondary Education	5	
(Ed. Psych. 211, Sec. Ed. 241, and Ed. Prac. 242 are to be taken concurrently.)		
Ed. Prac. 250—School and Community Experiences	2	
(This course may be omitted if eighteen hours in education are secured otherwise.)		
Teachers' Minor		at least 20
Desirable teaching combinations with Russian include English, French, German, Latin, Spanish, history, music, psychology, or social studies.		
Electives		
Recommended electives include: Art 111, 112; Humanities 363, 364; Music 130, 131; Philosophy 110; Slavic 382; Polish 201, 202; History 313–314; courses in Russian Language and Area Studies (Geography 353, Sociology 350), advanced courses in the major or minor field.		
Total		at least 123

Specialty for Teaching Russian in Both High School and Elementary School

This specialty offers preparation for those who wish to teach foreign language and another subject in a high school or foreign language only in an elementary school under Illinois teacher certification regulations. Completion of the curriculum described above will qualify the student for the high school certificate which permits him to teach Russian in grades six through twelve. A student who wishes to prepare for teaching Russian in the elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the "Teachers' Minor" required in the above curriculum:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers	3
El. Ed. 233—Classroom Programs in Childhood Education	2
El. Ed. 333—The Teaching of Language Arts in the Elementary School	3
El. Ed. 336—Primary Reading	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, the student will be entitled to the special certificate, which will permit him to teach Russian in all grades of the public schools, as well as to the high school certificate. The special certificate does not qualify him to teach any elementary school subjects other than the one named on the certificate.

The student may complete a "Teachers' Minor" mentioned above, if he wishes, but additional hours will be required.

Teacher Education Minor in Russian

	HOURS
Russian 101–102—First-Year Russian	8
Russian 103–104—Second-Year Russian	8
Russian 211–212—Oral Russian	4
Russian 213 or 214—Russian Composition	2
Total	22

Curriculum Preparatory to the Teaching of Social Studies

For the Degree of Bachelor of Arts in the Teaching of Social Studies

This curriculum offers preparation for teachers of high school and junior high school courses in history, sociology, economics, political science, geography, and general social studies. The courses outlined total 131 to 139 hours. A minimum of 120 hours of credit, not counting the first two years of military training and physical education,[1] is required for graduation. This curriculum provides two options between which the student must select by the end of the sophomore year in consultation with his adviser. The basic Liberal Arts and Sciences requirements (rhetoric, foreign language, etc.) and the general education courses (approved sequences in these three areas: natural sciences, social sciences, and humanities) are identical for both options. The primary difference between the two is the choice of teaching minor. Under Option A the teaching minor must be selected from an approved field other than the social studies, while Option B requires that the teaching minor be in one of the fields included in the social studies.

The specimen four-year curriculum is appropriate for both Option A and Option B; differences between the two options are provided for by the electives. The specific major and minor requirements for the two options are listed below.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

OPTION A

		HOURS
Major		41
History	20	
Students are required to complete at least twelve hours in advanced courses (courses numbered 200 or 300) in history. In these advanced courses, at least six hours must be taken in American history and at least six hours in European history (ancient, medieval, English, or modern), or non-Western history.		
Social Studies	21	
Students are required to include at least one course in each of the following: economics, geography, political science, sociology. At least eight hours must be taken in each of two of these four fields.		
Minor		20 to 24
Students will select a teaching minor in a field other than the social studies as described in this catalog. Approved fields include art, English, French, German, home economics, Latin, mathematics, music, physical education, Spanish, commerce, and Russian.		

OPTION B

Major		36
History	20	
Students are required to complete twelve to fourteen hours in advanced courses (courses numbered 200 or 300) in history. In these advanced courses, at least six hours must be taken in American history, and at least six hours in European history (ancient, medieval, English, or modern), or non-Western history.		
Social Studies	16	
Students are required to complete at least eight hours in each of two of the following fields: economics, geography, political science, sociology.		

Minor	20
Students will select a teaching minor in one of the following fields: Economics, geography, political science, sociology. The field selected must not be either of the two social sciences chosen for inclusion in the social studies section of the major.	

Students electing either Option A or Option B must complete the following requirements:

	HOURS
Education	at least 18
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects 2	
Hist. Phil. Ed. 201—Foundations of American Education 2	
Ed. Psych. 211—Educational Psychology 3	
Sec. Ed. 240—Principles of Secondary Education 2	
Sec. Ed. 241—Technic of Teaching in the Secondary School 4	
Ed. Prac. 242—Educational Practice in Secondary Education 5	
(Ed. Prac. 242, Ed. Psych. 211, and Sec. Ed. 241 are to be taken concurrently.)	
Ed. Prac. 250—School and Community Experiences (Elective) 2	
Rhetoric and Speech	8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking 9	
or Speech 111–112—Verbal Communication 8	
Psych. 100—Introduction to Psychology	4
General Education Sequences	12 to 16
Approved sequences are required in humanities, and either biological or physical science; see the list under the sciences and letters curriculum of the College of Liberal Arts and Sciences.	
Foreign Language	0 to 16
A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. (See foreign language requirement, page 363.)	
Pol. Sci. 150—American Government: Organization and Powers; or Pol. Sci. 191—Principles of Political Science	3 or 4
Hist. 152—History of the United States, 1865 to the Present	4
Students needing credit for advanced hours in American history may substitute History 262.	
Physical Education	4

NOTES

[1] Even though general University regulations do not require it, students transferring into this curriculum with more than sixty semester hours must have credit in physical education in order to be eligible for teacher certification.

Teacher Education Minors in Social Studies

MINORS OTHER THAN HISTORY

For a minor in social studies, other than history, a student must complete at least eight hours of work in each of two of the following subjects: economics, geography, political science, sociology. The minimum total required for a minor is twenty-four hours.

MINOR IN HISTORY

For a minor in history, a student must complete five to six hours in advanced courses in American history, eight hours in general European history, and two or three hours in one of the following: ancient, English, medieval, or Latin American history. The minimum total required for a minor is twenty-four hours.

Curriculum Preparatory to the Teaching of Spanish

For the Degree of Bachelor of Arts in the Teaching of Spanish

A minimum of 123 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

	HOURS	
Education		at least 18
Ed. Prac. 242—Educational Practice in Secondary Education	5	
(Ed. Prac. 242, Ed. Psych. 211, and Sec. Ed. 241 are to be taken concurrently.)		
Ed. Prac. 250—School and Community Experiences	2	
(This course may be omitted if eighteen hours in education are secured otherwise.)		
Ed. Psych. 211—Educational Psychology	3	
Hist. Phil. Ed. 201—Foundations of American Education	2	
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	
Sec. Ed. 240—Principles of Secondary Education	2	
Sec. Ed. 241—Technic of Teaching in the Secondary School	4	
General Education		16
Approved sequences are required in social science and either biological science or physical science; see the list under the sciences and letters curriculum in the College of Liberal Arts and Sciences.		
History		3 or 4
Hist. 151—History of the United States to 1865	4	
Hist. 152—History of the United States, 1865 to the Present	4	
Hist. 261—The First Century of the American Republic	3	
Hist. 262—The United States: World Power in an Industrial Age Since 1877	3	
Physical Education		4
Pol. Sci. 150—American Government: Organization and Powers		3
Psych. 100—Introduction to Psychology		4
Rhetoric and Speech		8 or 9
Rhet. 101–102—Rhetoric and Composition; Speech 101—Principles of Effective Speaking, or Speech 141—Oral Interpretation	9	
or Speech 111–112—Verbal Communication	8	
Teachers' Major in Spanish		43
Spanish 101–102—Elementary Spanish	8	
Spanish 103–104—Intermediate Spanish	8	
Spanish 211–212—Intermediate Composition and Conversation	6	
Spanish 215—Spoken Spanish	4	
Spanish 221—Spanish Drama and Poetry of the Twentieth Century	3	
Spanish 222—Spanish-American Prose Fiction of the Twentieth Century	3	
Spanish 280—Teachers' Course	2	
Spanish 332—La Cultura Hispanica, Hispanoamerica	2	
Spanish 351—Phonetics, and Spanish 352—Syntax	4	
Spanish Literature Course: 305 or 306	3	
Teachers' Minor		at least 20
Minor teaching subjects which constitute desirable combinations with Spanish include English, Latin, history, French, German, Russian, music, or social studies.		
Electives		13 or 12
Recommended electives are art, English, history, music, and Spanish.		
Total		at least 123

Specialty for Teaching Spanish in Both High School and Elementary School

This specialty offers preparation for those who wish to teach foreign language and another subject in a high school or foreign language only in an elementary school under Illinois teacher certification regulations. Completion of the curriculum described above will qualify the student for the high school certificate which permits him to teach Spanish in grades six through twelve. A student who wishes to prepare for teaching Spanish

in the elementary school, as contrasted with one who wishes to prepare for general elementary school teaching, should substitute the following for the "Teachers' Minor" required in the above curriculum:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers	3
El. Ed. 233—Classroom Programs in Childhood Education	2
El. Ed. 333—The Teaching of Language Arts in the Elementary School	3
El. Ed. 336—Primary Reading	3

The student teaching must be done in the seventh or eighth grade.

If these requirements are met, the student will be entitled to the special certificate, which will permit him to teach Spanish in all grades of the public schools, as well as to the high school certificate. The special certificate does not qualify him to teach any elementary school subjects other than the one named on the certificate.

The student may complete a "Teachers' Minor" mentioned above, if he wishes, but additional hours will be required.

Teacher Education Minor in Spanish

	HOURS
Spanish 101–102—Elementary Spanish	8
Spanish 103–104—Intermediate Spanish	8
Spanish 211–212—Intermediate Composition and Conversation	6
Total	22

Curriculum Preparatory to the Teaching of Speech

For the Degree of Bachelor of Arts in the Teaching of Speech

This program is designed to give the teacher a foundation in the areas of public speaking and theatre arts. A minimum of 128 hours of credit, not counting the first two years of military training and physical education, is required for graduation.

Students are required to complete one teaching minor. In addition, beginning teachers of speech may need to complete a second teaching minor.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

FIRST YEAR FIRST SEMESTER	16 HOURS	SECOND SEMESTER	16 HOURS
Foreign Language[1]	4	Foreign Language[1]	4
Rhet. 101—Rhetoric and Composition	3	Rhet. 102—Rhetoric and Composition	3
Science	3	Science	3
Speech 101—Principles of Effective Speaking	3	Speech 141—Oral Interpretation	3
Physical Education	1	Physical Education	1
Electives	2	Electives	2
SECOND YEAR	**16 HOURS**		**18 HOURS**
English Literature Elective	3	Foreign Language[1]	4
Foreign Language[1]	4	Hist. 152—History of the United States, 1865 to the Present	4
Pol. Sci. 150—American Government: Organization and Powers	3	Psych. 100—Introduction to Psychology	4
Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	Speech 121—Advanced Public Speaking: The Logical Bases of Discourse	3
Speech 161—Fundomentals of Acting	3	Physical Education	1
Physical Education	1	Electives	2

THIRD YEAR	16 HOURS		18 HOURS
English Literature Elective	3	Hist. Phil. Ed. 201—Foundations of American Education	2
Speech 157—Elements of Stagecraft	4	Sec. Ed. 240—Principles of Secondary Education	2
Speech 301—General Phonetics	3	Speech 113—Group Discussion and Conference Leadership	3
Electives	6	Speech 255—Directing, I	3
		Electives	8

FOURTH YEAR	18 HOURS		16 HOURS
Speech 208—Speech and Hearing Problems in the Classroom	3	Ed. Prac. 242—Educational Practice in Secondary Education	5
Speech 375—Speech Science	4	Ed. Psych. 211—Educational Psychology	3
English Literature Elective	3	Sec. Ed. 247—Teaching of Speech	5
Electives	8	Electives	3

NOTES

[1] A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required. (See foreign language requirement, page 363.)

Teacher Education Minor in Speech

	HOURS
Speech 101—Principles of Effective Speaking	3
Speech 121—Advanced Public Speaking: The Logical Bases of Discourse	3
Speech 141—Oral Interpretation	3
Speech 161—Fundamentals of Acting	3
Speech 203—Dramatics for Teachers	3
Speech 204—Speech for Teachers	3
Speech 301—General Phonetics	3
Speech Electives	3
Total	24

Curriculum in Speech and Hearing Sciences

For the Degree of Bachelor of Science in Speech and Hearing Science

The curriculum in speech and hearing science is a pre-professional degree program. The curriculum is designed to prepare students to enter professional training at the graduate level in speech pathology or audiology. Students who desire certification for work in the public schools can complete certification requirements by completing a minor in education and completing the degree of Master of Science.[1] To remain in good standing in the curriculum the student must have achieved a cumulative college average of at least 3.65 by the completion of his junior year. The degree of Bachelor of Science requires completion of at least 128 semester hours (exclusive of physical education) as described below.

	HOURS
General Education	23
Physical Education	4
Rhetoric	6 to 8

Speech 111–112—Verbal Communication (eight hours), may be substituted for Rhetoric 101–102—Freshman Rhetoric and Composition (six hours) and Speech 101—Principles of Effective Speaking.

The biological science sequence may be satisfied by either Zoology 104—Elementary Zoology, or Physiology 103—Introduction to Human Physiology, and

Psychology 103—Introductian to Experimental Psychalagy. The physical science sequence may be satisfied by eight hours of mathematics (Mathematics 120 and 131—Calculus and Analytic Geometry, are recommended); Liberal Arts and Sciences 141–142—Physical Science, I and II, or eight hours in either physics or chemistry. The approved social science sequence is required; see the list of approved sequences under the sciences and letters curriculum in the College of Liberal Arts and Sciences. (Note: A course in political science covering both state and federal constitutions and a course in United States history should be chosen if the student is interested in the school speech and hearing program.)

Foreign Language ..... 0 to 16

A reading knowledge of a foreign language equivalent to that resulting from four semesters of study of a foreign language commenced in college is required (see foreign language requirement, page 363).

Psychology 12
- Psych. 135—Statistical Thinking in Psychalogy 3
- Psych. 216—Child Psychology, or Educational Psychology 236—Child Develapment for Elementary Teachers 3
- Psych. 250—Psychology af Personality 3
- Psych. 248—Psychology of Learning, or Ed. Psych. 311—Psychology of Learning far Teachers 3

Speech 54
- Speech 101—Principles of Effective Speaking 3
- Speech 105—Voice and Articulation 2
- Speech 109—Introductian to Physiological Phonetics 3
- Speech 175—A Survey of Historical and Professional Aspects of Speech Pathology and Audialogy 2
- Speech 375—Speech Science, I 4
- Speech 376—Speech Science, II 4
- Speech 378—Hearing Science 3
- Speech 383—Develapment af Spoken Language 3
- Speech 385—Speech Pathology, I 3
- Speech 386—Basic Diagnostic and Therapeutic Principles of Speech Correction 3
- Speech 387—Practicum in Speech Diagnosis and Therapy 3
- Speech 388—Speech Pathology, II 3
- Speech 389—Psychological Appraisal in Speech Pathology and Audiology. 3
- Speech 391—Introduction ta Hearing Disorders 3
- Speech 393—Aural Rehabilitation 3
- Speech 395—Audiametry 3
- Speech 398—Practicum in Audialagy 3
- Speech 399—Design and Analysis of Experiments in Speech and Hearing Science 3

Electives ..... 18 to 34

Recommended electives are: Mathematics 112—College Algebra; Speech 141—Oral Interpretation; Speech 121—Advanced Public Speaking: The Lagical Bases af Discourse; Music 100—Rudiments of Theory; Music 101—Theory of Music, I; a course in philosophy, history, political science, ar economics, ar courses in the student's minor area. Recommended minor areas include: psychology, education, mathematics, physiology, linguistics, ar psycholinguistics.

Education ..... at least 18 hours for certificatian

NOTES

[1] If the student plans to pursue the school speech and hearing program, it is recommended that his minor be education and that he elect courses required for state certification including: Special Education 117—Exceptional Children; Elementary Education 233—Classroom Problems in Childhood Education; Special Education 324—Mental and Educational Measurement of Exceptional Children.

For the Degree of Master of Science in Speech and Hearing Science

FIFTH YEAR

Ed. Prac. 220—Educational Practice in the Education of Exceptional Children	(5 hours)[1]
Ed. Psych. 311 and 312	1 unit
Hist. Phil. Ed.—two courses selected from those numbered 301, 302, 304, and 305	1 unit
Four units to be taken from the following:	
Speech 495—Special Problems	1 or 2 units
Speech 383—Development of Spoken Language, or one unit in Speech Pathology or Audiology	1 unit
Speech 390—Communication Disorders in Children: Habilitation and Rehabilitation	1 unit
Speech 481—Seminar in Neuropathologies of Speech and Language	1 unit
Speech 482—Seminar in Stuttering	1 unit
Speech 483—Psychology of Speech and Hearing Disorders I	1 unit
Speech 486—Advanced Clinical Techniques in Speech and Hearing	1 unit
Speech 488—Diagnostic Procedures in Pathologies of Speech and Language	1 unit
Speech 489—Seminar in Orofacial and Laryngeal Pathologies of Speech	1 unit

At the time the Master of Science in Speech and Hearing Science is completed, candidates subject to certification must have completed at least twenty-three semester hours of professional education courses or their equivalents for teacher certification purposes. These courses are listed below:

Educational Practice 220	5 hours
Educational Psychology 311 and 312	1 unit
Elementary Education 233	2 hours
History and Philosophy of Education (select two of the following: 301, 302, 304, 305)	1 unit
Special Education 117	3 hours
Special Education 324	2 hours
Speech 486 (methods)	½ unit
Total	23 hours

NOTES

[1] Undergraduate credit for teacher certification purposes.

Main Reading Room of the University of Illinois Library.

Graduate School of Library Science

Although the Graduate School of Library Science is a graduate professional school, it offers a series of courses at the undergraduate level. These courses may be taken as electives, or as a minor in the College of Liberal Arts and Sciences or in the College of Education. They serve two purposes: to give the student instruction in the fundamental principles and practices of librarianship providing the basic preparation for his professional studies in a fifth year, and to give prospective school librarians the basic preparation necessary to meet certification requirements for school library work and to qualify as instructional materials specialists. These same courses also may be taken as electives by students in other colleges.

A sound, well-balanced intellectual background is needed for a career in library work. By its nature, the work of the librarian is far-ranging and encyclopedic in subject coverage, even in the most highly specialized libraries. History, literature, the social sciences, the natural sciences, and foreign languages are all valuable to the prospective librarian.

In addition to a broad general education, the student should develop a strong major in some subject area during his last two years of undergraduate work or in graduate study. Such subjects as chemistry, physics, mathematics, education, engineering, law, agricultural sciences, art, and history are particularly needed in modern library development and, when combined with library training, leads to a great variety of interesting, well-paying library positions.

The knowledge of foreign languages which the student should acquire before entering the Graduate School of Library Science varies with the type of library work in which he is interested. The minimum requirement for entrance is two years of college-level study of any foreign languages. For bibliographical work, reference, cataloging, and most types of work in college, university, and other scholarly libraries, a reading knowledge of at least two modern foreign languages is desirable.

The Director of the Graduate School of Library Science is glad to answer any inquiries from students who choose library science as a minor, re-

garding the type of preprofessional education best suited to their particular needs and interests.

TEACHER EDUCATION MINOR IN LIBRARY SCIENCE

The Graduate School of Library Science offers courses for advanced undergraduates in the College of Education and in the College of Liberal Arts and Sciences, who wish to qualify both as classroom teachers and as librarians in small elementary, junior high, and senior high schools, or as assistant librarians in large schools. Full professional training leading to a master's degree in library science is required of those who wish to prepare for positions in large schools, for supervisory positions in the school library field, and for positions as instructional materials specialists.

A description of the Specialty in Elementary School Librarianship, open to students in the Curriculum Preparatory to Elementary School Teaching, appears on page 274.

Students preparing to teach in junior or senior high school and wishing to minor in library science should consult with the appropriate advisers in the Graduate School of Library Science as early in their college work as possible and desirably by no later than the second semester of the sophomore year. It is then possible to prepare a course of study which meets Illinois State certification requirements for high school teachers and school librarians and which meets University of Illinois requirements for admission to the Graduate School of Library Science.

This minor requires a minimum of twenty-six semester hours of credit including twenty-one semester hours in library science and five semester hours of professional education. The course work in library science includes the four 200-level courses listed below, Library Science 304, and Library Science 308, and one of the 300-numbered electives as appropriate to the grade level or teaching field. The four 200-level courses below are prerequisite to the advanced courses in library science required for the master's degree. The student will take the library sections of Secondary Education 241, Technic of Teaching in the Secondary School, and Educational Practice 242, Educational Practice in Secondary Education. *Enrollment in the library section of Educational Practice 242 requires an application in addition to that for educational practice in the student's major teaching field.* Educational Practice 242 provides the student with supervised experiences in secondary school librarianship. The courses in secondary education and educational practice may not be substituted for any of the requirements of the curriculum in the student's first teaching field.

	HOURS
Library Science 201—Introduction to Reference Service	3
Library Science 204—Development and Operation of Libraries	3
Library Science 255—Organization of Library Materials	3
Library Science 258—Selection of Library Materials	3
Library Science 304—Library Materials for Young Adults	3
Library Science 308—Audio-Visual Services in Libraries	3
Elective in Library Science (one selected from the following):	
Library Science 301—Literature of the Humanities and Social Sciences	(3)
Library Science 302—Literature of the Sciences	(3)
Library Science 303—Library Materials for Children	(3)
Library Science 309—Storytelling	(3)
Professional Education:	
Secondary Education 241—Technic of Teaching in the Secondary School	3
Educational Practice 242—Educational Practice in Secondary Education	2
Total	26

GRADUATE WORK

For information about the graduate programs in library science, see the announcements of the Graduate School of Library Science and the Graduate College, or write to the Director of the Graduate School of Library Science, 329 Library, Urbana, Illinois 61801.

Rehabilitation-Education Center.

College of Physical Education

The College of Physical Education was first established as the School of Physical Education in 1932 and then changed to the College of Physical Education in 1957 with four departments: (1) Department of Health and Safety Education, (2) Department of Physical Education for Men, (3) Department of Physical Education for Women, and (4) Department of Recreation and Park Administration. The Bachelor of Science and the Master of Science degrees are offered by these departments. In addition, the Doctor of Philosophy degree in physical education (including options in health and safety education and in recreation and park administration) is offered. These programs offer opportunities for specialization in teaching, leadership, administration, research, and scholarship.

All students entering the University as freshmen are required to obtain four credit hours in physical education. It is recommended that one semester of Basic Movement (Physical Education for Women 100) or Foundations of Physical Activity (Physical Education for Men 100) be taken during the freshman year. One semester of swimming (Physical Education for Women 110 or 111) (Physical Education for Men 107) is also recommended for women students. Both departments encourage that the requirement be fulfilled in four successive semesters, starting with the first semester of enrollment in the University. Veterans are excused from physical education requirement but may elect courses, if desired. Credit may be obtained by passing courses in physical education or by passing proficiency examinations which are offered by the departments. The basic instruction programs offered both men and women include a wide variety of courses designed to meet varying needs and interests of the students. Education through the physical is emphasized via development of fundamental motor abilities, organic power and recreational sport skills, amelioration of physical defects, and the development of an appreciation of physical fitness and sports.

Programs of organized and free-time intramural sports are sponsored by the Division of Intramural Activities for undergraduate and graduate students and for faculty and staff.

The Department of Physical Education for Women sponsors the Women's Extramural Sports Association and Terrapin Club (synchronized swimming).

As a public service, the Department of Physical Education for Men operates two special clinics–Physical Fitness and Exercise Therapy. The first, open to well persons, is devoted to developing physical fitness through exercise. The second, open to convalescent or physically handicapped persons, is devoted to reducing, correcting, or rehabilitating physical deficiencies. Service in both is available to students, faculty members, staff members, and the general public on recommendation of a medical doctor.

The College of Physical Education in cooperation with the College of Agriculture provides a state-wide consultant service through the Office of Recreation and Park Resources in the Department of Recreation and Park Administration. This service assists local municipalities, agencies, and groups, both rural and urban, in initiating new programs and developing existing recreation and park programs, facilities, and resources, including farm recreation enterprises. The Department of Recreation and Park Administration is involved in an interdisciplinary research program through the Motor Performance and Play Research Laboratory of the Children's Research Center.

The college also operates the Division of Rehabilitation-Education Services. This unit is devoted to serving the special needs—in the areas of counseling, housing, eating, recreation, transportation, and the like—of all seriously disabled students on campus.

HONORS AT GRADUATION

At graduation, the College of Physical Education grants honors to superior students. To be eligible, students must have completed a minimum of four semesters of work or sixty-five hours of credit in residence at the University and be recommended by the faculty. For the degree with Honors, the student must have an average of 4.0 or better in all courses used for graduation; for the degree with High Honors, an average of 4.25 or better; and for the degree with Highest Honors, an average of 4.5 or better.

GENERAL EDUCATION SEQUENCE REQUIREMENTS

To comply with the general education requirements effective for students entering after June 1, 1964, the College of Physical Education requires that each student must have a minimum approved sequence of six semester hours in the humanities (an additional three hours, not necessarily in sequence, required in Physical Education for Women and Physical Education for Men), the social sciences, and the natural sciences. Listed below are the sequences approved by the college.

HUMANITIES

Art 105, 107, 111, 112
Art 105, 107, 115, 116
Art 111, 112
Art 111, 112, 115
Art 115, 116, 107
English 101, 102
English 101, 102, 103
English 101, 115, 116
English 101, 105, 106
English 102, 115, 116
English 105, 106
English 115, 116
English 121, 122, 123
English 231, 235
English 231, 232, 235
English 251, 252, 253, 287 (any combination totaling 9 hours)
English 251, 252, 253
English 255, 256
English 272, 273
English 281, 282
French 103, 104, 113
German 103, 104, 113
History 131, 132
History 260, 261, 262
Humanities 151, 152
Humanities 211, 212
Liberal Arts and Sciences 161, 162
Music 100, 130, 131
Music 110, 113, 115

Music 113, 130, 131
Music 130, 131
Music 130, 131, 140
Philosophy 101, 102
Philosophy 101, 102, 103
Philosophy 101, 102, 104
Philosophy 101, 102, 105
Philosophy 101, 102, 110
Philosophy 101, 110
Philosophy 103, 104
Philosophy 104, 105, 110
Philosophy 101, 102 (plus any 300-level course totaling 9 hours in all)
Russian 101, 102
Spanish 103, 104, 115
Speech 113, 121, 204
Speech 113, 121, 221
Speech 141, 342, 345
Speech 177, 178
Speech 207, 307, 308
Speech 311, 312, 322
Speech 352, 361, 362, 366 (any combination totaling 9 hours)
Speech and Theatre 361, 362, 366

NATURAL SCIENCES

Chemistry 101,132
Chemistry 102, 132
Physiology 103, Botany 100
Physiology 103, Psychology 103
Zoology 104, Botany 100
Zoology 104, Physiology 103
Zoology 104, Physiology 234
Zoology 104, Psychology 103

SOCIAL SCIENCES

Anthropology 102, 103
Economics 108, 214
Economics 108, 238
Economics 108, 312
History 151, 152
History 211, 212
History 371, 372
Political Science 150, 151
Political Science 150, 305
Political Science 150, 312
Political Science 191, 192
Political Science 150, History 151
Political Science 150, History 152
Political Science 150, History 261
Political Science 150, History 262
Political Science 150, 184, Journalism 215
Psychology 100, 201
Psychology 100, 216
Psychology 100, 217
Psychology 100, 250
Psychology 103, 201
Psychology 103, 216
Psychology 103, 217
Psychology 103, 250
Psychology 100, Educational Psychology 211, 325
Psychology 100, 217, Educational Psychology 117
Psychology 103, Educational Psychology 211, 325
Sociology 100, 110
Sociology 100, 131
Sociology 100, 228
Sociology 100, 231
Sociology 100, 323
Sociology 151, 152

Curriculum in Health Education

For the Degree of Bachelor of Science in Health and Safety Education

The curriculum in health education is open to both men and women. The requirements are the same for all students during the freshman and sophomore years. Upper-division students are offered options in school health education and school safety education and in community health education and public safety education during their junior and senior years. A minimum of 130 hours of credit, including physical education, is required for graduation in all options.

Students electing the school health education or the school safety education option must meet teacher education requirements applicable to all curricula and also complete one teacher education minor (see the section entitled "Urbana Council on Teacher Education" in this bulletin).

Students electing the community health education or the public safety education option are required to take a field work course during their junior or senior year.

For teacher education requirements applicable to all curricula, see pages 251 to 256.

SCHOOL HEALTH EDUCATION OPTION

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS
College Mathematics	3 or 4
H.E. 150—Health and Modern Life	3
P.E.M. 150—Introduction to Physical Education	2
Rhet. 101—Rhetoric and Composition	3
Zool. 104—Elementary Zoology	4
Physical Education	1

SECOND SEMESTER	16 HOURS
Chem. 101—General Chemistry	4
H.E. 110—Public Health	2
Rhet. 102—Rhetoric and Composition	3
Sociol. 100—Introduction to Sociology	3
Speech 101—Principles of Effective Speaking	3
Physical Education	1

SECOND YEAR

	18 HOURS
Physiol. 103—Introduction to Human Physiology	4
Pol. Sci. 150—American Government: Organization and Powers	3
Psych. 100—Introduction to Psychology	4
Zool. 106—Principles of Heredity	3
Humanities Electives from Approved Sequences	3
Physical Education	1

	16 HOURS
Anth. 103—Introduction to Cultural Anthropology	4
H.E. 200—Mental Health	2
Hist. 152—History of the United States, 1865 to the Present	4
Home Econ. 120—Elementary Nutrition	2
Humanities Electives from Approved Sequences	3
Physical Education	1

THIRD YEAR

	17 HOURS
H.E. 282—Organization of School Health Programs	3
H.E. 283—Man and His Diseases	2
H.E. 390—Public Health Education	2
Hist. Phil. Ed. 201—Foundations of American Education	2
Microbiol. 100—Introductory Microbiology	3
Microbiol. 101—Introductory Experimental Microbiology	2
Electives	3

	17 HOURS
Ed. Psych. 390—Elements of Educational Statistics	3
H.E. 281—First Aid	2
H.E. 288—Principles of Health Education	3
P.E.M. or P.E.W. 210—Inspection Trip	0
S.E. 280—Safety Education	3
Electives	6

FOURTH YEAR

	15 HOURS
Ed. Prac. 242—Educational Practice in Secondary Education	5
Ed. Prac. 250—School and Community Experiences	2
P.E.M. or P.E.W. 205—Tests and Measurements in Health, Physical Education, and Recreation	3
Sec. Ed. 240—Principles of Secondary Education	2
Sec. Ed. 241—Technic of Teaching in the Secondary School	3

	17 HOURS
Ed. Psych. 211—Educational Psychology	3
H.E. 287—Concepts of Health, Aging, and Longevity	2
H.E. 391—Public Health Statistics	2
Electives	10

COMMUNITY HEALTH EDUCATION OPTION

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS
College Mathematics	3 or 4
H.E. 150—Health and Modern Life	3
P.E.M. 150—Professional Orientation	2
Rhet. 101—Rhetoric and Composition	3
Zool. 104— Elementary Zoology	4
Physical Education	1

SECOND SEMESTER	16 HOURS
Chem. 101—General Chemistry	4
H.E. 110—Public Health	2
Rhet. 102—Rhetoric and Composition	3
Sociol. 100—Introduction to Sociology	3
Speech 101—Principles of Effective Speaking	3
Physical Education	1

SECOND YEAR	18 HOURS		16 HOURS
Physiol. 103—Introduction to Human Physiology	4	Anth. 103—Introduction to Cultural Anthropology	4
Pol. Sci. 150—American Government: Organization and Powers	3	H.E. 200—Mental Health	2
Psych. 100—Introduction to Psychology	4	Hist. 152—History of the United States, 1865 to the Present	4
Zool. 106—Principles of Heredity	3	Home Econ. 120—Elementary Nutrition	2
Humanities Electives	3	Humanities Electives	3
Physical Education	1	Physical Education	1

THIRD YEAR	16 HOURS		16 HOURS
H.E. 282—Organization of School Health Programs	3	Comm. 220—Processes and Systems of Communications	3
H.E. 283—Man and His Diseases	2	H.E. 281—First Aid	2
Microbiol. 100—Introductory Microbiology	3	H.E. 287—Concepts of Health, Aging, and Longevity	2
Microbiol. 101—Introductory Experimental Microbiology	2	H.E. 289—Health Education Field Work	0[1]
Sociol. 223—Stratification and Social Classes	3	S.E. 280—Safety Education	3
Electives	3	Sec. Ed. 354—Audio-Visual Materials and Problems	3
		Electives	3

FOURTH YEAR	17 HOURS		17 HOURS
Ed. Psych. 211—Educational Psychology	3	H.E. 288—Principles of Health Education	3
Ed. Psych. 390—Elements of Educational Statistics	3	H.E. 391—Public Health Statistics	2
H.E. 390—Public Health Education	2	Journ. 211—Newswriting[2]	3
P.E.M. or P.E.W. 205—Tests and Measurements in Health, Physical Education, and Recreation	3	Radio-TV 267—Radio Production and Direction	3
Radio-TV 252—Television Laboratory	3	Electives	6
Speech 113—Group Discussion and Conference Leadership	3		

NOTES

[1] H.E. 289—Health Education Field Work (no credit), requires junior standing in community health education.

[2] Elementary level typing skill is required.

SCHOOL SAFETY EDUCATION OPTION

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS	SECOND SEMESTER	16 HOURS
College Mathematics	3 or 4	Chem. 101—General Chemistry	4
H.E. 150—Health and Modern Life	3	H.E. 110—Public Health	2
P.E.M. 150—Introduction to Physical Education	2	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Sociol. 100—Introduction to Sociology	3
Zool. 104—Elementary Zoology	4	Speech 101—Principles of Effective Speaking	3
Physical Education	1	Physical Education	1

SECOND YEAR	18 HOURS		16 HOURS
Physiol. 103—Introduction to Human Physiology	4	Anth. 103—Introduction to Cultural Anthropology	4
Pol. Sci. 150—American Government: Organization and Powers	3	H.E. 200—Mental Health	2
Psych. 100—Introduction to Psychology	4	Hist. 152—History of the United States, 1865 to the Present	4
Zool. 106—Principles of Heredity	3	Home Econ. 120—Elementary Nutrition	2
Physical Education	1	Physical Education	1
Humanities Electives	3	Humanities Electives	3

THIRD YEAR	16 OR 17 HOURS		16 OR 17 HOURS
Hist. Phil. Ed. 201—Foundations of American Education	2	Ed. Psych. 390—Elements of Educational Statistics	3
H.E. 282—Organization of School Health Programs	3	H.E. 281—First Aid	2
I.E. 257—Safety Engineering	3	I.E. 358—Problems in Safety Engineering	3
S.E. 280—Safety Education	3	P.E.M. 210—Inspection Trip	0
S.E. 284—Driver Education	3	S.E. 294—Advanced Traffic Safety	3
Electives	2 or 3	Electives	5 or 6

FOURTH YEAR	18 HOURS		16 OR 17 HOURS
Ed. Prac. 242—Educational Practice in Secondary Education	5	C.E. 325—Highway Traffic Characteristics	3
Ed. Prac. 250—School and Community Experiences	2	H.E. 391—Public Health Statistics	2
Ed. Psych. 211—Educational Psychology	3	I.E. 359—Industrial Fire Protection	3
Sec. Ed. 240—Principles of Secondary Education	2	Electives	8 or 9
Sec. Ed. 241—Technic of Teaching in the Secondary School	3		
Electives	3		

RECOMMENDED ELECTIVES	HOURS
C.E. 345—Environmental Health Engineering	3
Comm. 360—Educational Uses of Television and Radio	3
Econ. 108—Elements of Economics	3 or 4
Pol. Sci. 151—American Government: Functions	3
Pol. Sci. 306—Municipal Problems	3
Speech 211—Business and Professional Speaking	2

PUBLIC SAFETY EDUCATION OPTION

FIRST YEAR

FIRST SEMESTER	16 OR 17 HOURS	SECOND SEMESTER	16 HOURS
College Mathematics	3 or 4	Chem. 101—General Chemistry	4
H.E. 150—Health and Modern Life	3	H.E. 110—Public Health	2
P.E.M. 150—Introduction to Physical Education	2	Rhet. 102—Rhetoric and Composition	3
Rhet. 101—Rhetoric and Composition	3	Sociol. 100—Introduction to Sociology	3
Zool. 104—Elementary Zoology	4	Speech 101—Principles of Effective Speaking	3
Physical Education	1	Physical Education	1

SECOND YEAR	18 HOURS		16 HOURS
Physiol. 103—Introduction to Human Physiology	4	Anth. 103—Introduction to Cultural Anthropology	4
Pol. Sci. 150—American Government: Organization and Powers	3	H.E. 200—Mental Health	2
Psych. 100—Introduction to Psychology	4	Hist. 152—History of the United States, 1865 to the Present	4
Zool. 106—Principles of Heredity	3	Home Econ. 120—Elementary Nutrition	2
Physical Education	1	Physical Education	1
Humanities Electives	3	Humanities Electives	3

THIRD YEAR	17 OR 18 HOURS	16 OR 17 HOURS
Econ. 108—Elements of Economics	3	
S.E. 280—Safety Education	3	
S.E. 284—Driver Education	3	
Speech 211—Business and Professional Speaking	2	
Electives	6 or 7	
Comm. 220—Processes and Systems of Communications		3
H.E. 281—First Aid		2
I.E. 357—Safety Engineering		3
S.E. 294—Advanced Traffic Safety Education		3
Speech 113—Group Discussion and Conference Leadership		3
Electives		2 or 3

FOURTH YEAR	17 OR 18 HOURS	16 OR 17 HOURS
Ed. Psych. 390—Elements of Educational Statistics	3	
I.E. 359—Industrial Fire Protection	3	
Psych. 245—Industrial Psychology	3	
Sociol. 223—Stratification and Social Classes	3	
Electives	5 or 6	
C.E. 325—Highway Traffic Characteristics		3
Comm. 360—Educational Uses of Television and Radio		3
H.E. 391—Public Health Statistics		2
I.E. 358—Problems in Safety Engineering		3
Journ. 211—Newswriting		3
S.E. 289—Safety Field Work[1]		0
Electives		2 or 3

NOTES

[1] S.E. 289—Safety Field Work (0 credit), prerequisite senior standing in public safety.

RECOMMENDED ELECTIVES	HOURS
C.E. 345—Environmental Health Engineering	3
Pol. Sci. 151—American Government: Functions	3
Pol. Sci. 306—Municipal Problems	3
Radio-TV 252—Television Laboratory	3

Teacher Education Minor in Health Education

	HOURS
H.E. 110—Public Health	2
H.E. 281—First Aid	2
H.E. 282—Organization of School Health Programs	3
H.E. 283—Man and His Diseases, or H.E. 287—Concepts of Health, Aging, and Longevity	2
H.E. 288—Principles of Health Education	3
Physiol. 103—Introduction to Human Physiology	4
Electives to be chosen from the following:	6 or 7
H.E. 283—Man and His Diseases, or H.E. 287—Concepts of Health, Aging, and Longevity	2
H.E. 391—Public Health Statistics	2
H.E. 200—Mental Health, or Psych. 250—Psychology of Personality	2 or 3
H.E. 206—Sex Education and Family Life, or Home Econ. 210—Family Relationships	2 or 3
Home Econ. 120—Elementary Nutrition, or Home Econ. 220—Principles of Nutrition	2 or 3
Home Econ. 322—Physical Growth and Nutrition	2
Microbiol. 100—Introductory Microbiology	3
Microbiol. 101—Introductory Experimental Microbiology	2
Physiol./I.E. 306—Quantitative Methods in Ergonomics	4
S.E. 280—Safety Education	3
Minimum Total	22

Teacher Education Minor in Safety and Driver Education

		HOURS
H.E. 281—First Aid		2
S.E. 280—Safety Education		3
S.E. 284—Driver Education		3
S.E. 294—Advanced Traffic Safety Education		3
Courses to be chosen from the following:		6
C.E. 325—Highway Traffic Characteristics	3	
H.E. 282—Organization of School Health Programs	3	
H.E. 285—Sex Education for Teachers		
I.E. 358—Problems in Safety Engineering	3	
I.E. 359—Industrial Fire Protection	3	
Pol. Sci. 150—American Government: Organization and Powers	3	
Total		17

Curriculum in Physical Education for Men

For the Degree of Bachelor of Science in Physical Education

A minimum of 132 hours of credit is required for graduation.
For teacher education requirements applicable to all curricula, see pages 251 to 256.

OPTION FOR THE HIGH SCHOOL CERTIFICATE (GRADES 6 THROUGH 12)

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	18 OR 16 HOURS
P.E.M. 150—Introduction to Physical Education	2	H.E. 150—Health and Modern Life	3
P.E.M. 151—Beginning Basketball	2	Math. 111 or 112 or a higher numbered course in mathematics	5 or 3
P.E.M. 152—Beginning Football	2	P.E.M. 153—Fitness Programs	2
Rhet. 101—Freshman Rhetoric and Composition[1]	3	P.E.M. 154—Swimming	2
Speech 101—Principles of Effective Speaking[1]	3	Rhet. 102—Freshman Rhetoric and Composition[1]	3
Zool. 104—Elementary Zoology	4	Electives	3

SECOND YEAR	18 HOURS		18 HOURS
P.E.M. 155—Gymnastics	1	Hist. 152—History of the United States, 1865 to the Present	4
P.E.M. 157—Track and Field	1	P.E.M. 156—Wrestling	1
Physiol. 103—Introduction to Human Physiology	4	P.E.M. 158—Baseball	1
Pol. Sci. 150—American Government: Organization and Powers	3	Physiol. 234—Human Anatomy and Physiology	5
Humanities Electives	3	Humanities Electives	3
Electives	6	Electives	4

THIRD YEAR	16 HOURS		15 HOURS
H.E. 282—Organization of School Health Programs	3	Hist. Phil. Ed. 201—Foundations of American Education	2
One of the Following:	1	One of the following:	1
P.E.M. 161—Soccer and Volleyball		P.E.M. 161—Soccer and Volleyball	
P.E.M. 162—Tennis and Squash		P.E.M. 162—Tennis and Squash	
P.E.M. 163—Lacrosse and Handball		P.E.M. 163—Lacrosse and Handball	
P.E.M./P.E.W. 164—Golf and Fencing		P.E.M./P.E.W. 164—Golf and Fencing	
P.E.M. 207—Prevention and Care of Athletic Injuries	3	P.E.M./P.E.W. 206—Kinesiology	3
P.E.M. 235—Square and Ballroom Dance	2	P.E.M. 210—Inspection Trip	0
Psych. 100—Introduction to Psychology	4	P.E.M. 225—Supervised Experience in Physical Education	2
Humanities Electives	3	P.E.M. 240—Physiology of Human Exercise	3
		Sec. Ed. 240—Principles of Secondary Education	2
		P.E.M. 240—Physiology of Human Exercise	3
		Electives	2

FOURTH YEAR	15 HOURS		17 HOURS
P.E.M. 208—Theory of Prescribing Exercise	3	Ed. Prac. 242—Educational Practice in Secondary Education	5
P.E.M./P.E.W. 209—History of Sport	3	Ed. Psych. 211—Educational Psychology	3
P.E.M. 225—Supervised Experience in Physical Education	1	P.E.M. 204—Administration of Physical Education	3
P.E.M. 271—Administration of High School Sport Programs	3	P.E.M. 205—Tests and Measurements in Health, Physical Education, and Recreation	3
Electives	5	Sec. Ed. 241—Technic of Teaching in the Secondary School	3

NOTES

[1] Speech 111 and 112 may be substituted for Rhetoric 101, Rhetoric 102, and Speech 101.

OPTION FOR THE SPECIAL CERTIFICATE (GRADES K THROUGH 14)

The following additional courses will be required of the student who selects this option:

	HOURS
Ed. Psych. 236—Child Development for Elementary Teachers, or Psych. 216—Child Psychology	3
Ed. Prac. 238—Educational Practice for Special Fieds in Elementary Schools (substitutes for 3 hours of Educational Practice 242 shown above)	(3)
P.E.M. 166—Elementary School Games	3
P.E.W. 222—Physical Education in the Elementary School	2
Total	8

NOTE: This option involves one other change in requirements. Dance 243, Creative Dance for Children, will be required in place of P.E.M./P.E.W. 235, Square and Ballroom Dance.

Teacher Education Minor in Physical Education for Men

	HOURS
P.E.M. 153—Fitness Programs	2
P.E.M. 154—Swimming	2
P.E.M. 204—Administration of Physical Education, or P.E.M. 220—Physical Education for the Classroom Teacher[1]	2 or 3
P.E.M. 205—Tests and Measurements in Health, Physical Education, and Recreation	3
P.E.M. 206/P.E.W.—Kinesiology	3
P.E.M 207—Prevention and Care of Athletic Injuries, or H.E. 281—First Aid[1]	2 or 3
Physiol. 234—Human Anatomy and Physiology	5
Other Professional activity courses	4
Total	23 to 25

NOTES

[1] Option for Special Certificate (Grades K–14).

Teacher Education Minor in Coaching

(Physical Education majors are not permitted to pursue this minor.)

	HOURS
Physiol. 234—Human Anatomy and Physiology	5
P.E.M. 153—Fitness Programs	2
P.E.M. 207—Prevention and Care of Athletic Injuries	3
P.E.M. 217—Theory of Coaching	2
P.E.M. 271—Administration of High School Sport Programs	3
Professional Laboratory Courses	8
Total	23

Curriculum in Physical Education for Women

For the Degree of Bachelor of Science in Physical Education

A minimum of 132 hours of credit is required for graduation. All students must complete the prescribed courses or their equivalents listed below. For teacher education requirements applicable to all curricula, see pages 251 to 256.

This curriculum provides two options for Illinois teacher certification.

Option I. The High School Certificate permits the graduate to teach physical education and a minor subject in grades six through twelve.

Option II. The Special Certificate permits the graduate to teach physical education in all grades, kindergarten through fourteen. No minor teaching field is required.

GENERAL PHYSICAL EDUCATION (OPTIONS I AND II)

	HOURS
Rhetoric and Speech	8 or 9
Rhetoric 101–102 and Speech 101	9
or Speech 111–112	8
Psychology and Child Development Sequence	7
Psychology 100 or Psychology 103	4
Psychology 216, Psychology 217, or Educational Psychology 236	3
Natural Science Sequence	13
Zoology 104,[1] Physiology 103, and Physiology 234	
Social Science Sequence	6 or 7
History 152 or History 262	3 or 4
Political Science 150 or Political Science 191	3
Education	20
Secondary Education 101 or Physical Education for Women 150	2
Educational Psychology 211, Educational Practice 238, Secondary Education 240, Secondary Education 241, Educational Practice 242, Educational Practice 250	18
Health Education	8
Health Education 150, Health Education 281 and 282	
Electives[2]	31
Humanities sequence and elective	9
(see approved College of Physical Education humanities sequences)	
Option I —a minor teaching field	16 to 24
(suggested minor—biological science, English, foreign language, health education, mathematics, social studies, speech)	
Option II —general education electives	16
(see department approved general education electives below)[3]	
Electives (exclusive of above area electives)	6
Professional Courses in Physical Education and Dance	40
Physical Education for Women 151, 152, 153, 154, 155, 156, 166, 167	11
Physical Education for Women 204, 205, 206, 208, 209, 210, 213, 215, 216, 222, 235	23
Swimming Elective	1
Physical Education for Women 111, 112, 114, 115, 116, 117	
Specialty Elective (swim, dance, or sports)	4
Two acceptable courses and one theory of teaching course selected from Physical Education for Women 165, Physical Education for Women 214, Dance 243 or Dance 244.	
Dance	1
P.E.W. 157	
Total	132

NOTES

[1] Zoology 104 may be exempted if score on Biology Placement Examination is adequate.

[2] One course in mathematics is required if the student's score on the Mathematics Placement Examination indicates deficiency in this area.

[3] *General Education Electives: Humanities sequence.* (See College of Physical Education approved list of courses.)

Additional general education electives must be selected from the following areas:

Humanities—art, classics, English, humanities, music, philosophy, rhetoric (excluding business English), speech.

Foreign Languages—students planning to enter the Graduate College are advised to obtain a reading knowledge in French and/or German.

Natural Sciences—astronomy, biology, botany, chemistry, entomology, geology, mathematics, microbiology, physics, physiology, zoology.

Physical Education Honors Courses

Social Sciences—anthropology, economics, geography, history, political science, psychology, social science, sociology.

SAMPLE FOUR–YEAR PROGRAM FOR OPTIONS I AND II

FIRST YEAR

FIRST SEMESTER	16 HOURS	SECOND SEMESTER	17 HOURS
P.E.W. 150—Professional Orientation, or Sec. Ed. 101—Introduction to the Teaching of Secondary School Subjects	2	P.E.W. 157—Contemporary Dance, I	1
P.E.W. 151—Basic Movement	1	P.E.W. 153—Basketball, Track and Field	1
P.E.W. 152—Hockey and Volleyball	1	P.E.W. 156—Stunts, Tumbling and Trampoline	1
Rhet. 101—Rhetoric and Composition[1]	3	Psych. 100—Introduction to Psychology, or Psych. 103—Introduction to Experimental Psychology	4
Zool. 104—Elementary Zoology	4	Rhet. 102—Rhetoric and Composition[1]	3
H.E. 150—Health and Modern Life	3	Speech 101—Principles of Effective Speaking[1]	3
Electives[2]	2	Electives[2]	4

SECOND YEAR

	17 HOURS		17 OR 18 HOURS
P.E.W. 111—Swimming (or 112, 114, 115, 116, 117)	1	P.E.W. 155—Gymnastics and Apparatus II, and Tennis	1
P.E.W. 154—Softball, Gymnastics, and Apparatus, I	1	P.E.W. 166—Elementary School Games	3
P.E.W. 235—Square and Ballroom Dance	2	Physiol. 234—Human Anatomy	5
Physiol. 103—Introduction to Human Physiology	4	Hist. 152—History of the United States, 1865 to the Present, or Hist. 262—The United States: World Power in an Industrial Age Since 1877	3 or 4
Psych. 216—Child Psychology, or Psych. 217—Comparative Development, or Ed. Psych. 236—Child Development for Elementary Teachers	3	Electives[2]	5
Electives[2]	6		

THIRD YEAR

	17 HOURS		16 OR 17 HOURS
Ed. Psych. 211—Educational Psychology		H.E. 282—Organization of School Health Programs	3
H.E. 281—First Aid	2	P.E.W. 165—Teaching of Swimming, or P.E.W. 214—Teaching of Individual Sports, or Dance 243—Creative Dance for Children, or Dance 244—Teaching of Dance	2 or 3
P.E.W. 167—Teaching of Gymnastics and Dance	2	P.E.W. 208—Theory of Prescribing Exercise	3
P.E.W./P.E.M. 206—Kinesiology	3	P.E.W. 210—Observation Trips	0
Pol. Sci. 150—American Government: Organization and Powers, or Pol. Sci. 191—Principles of Political Science	3	P.E.W. 216—Supervised Experiences and Teaching, I	0
Electives[2]	4	P.E.W. 222—Physical Education in the Elementary School	2
		Sec. Ed. 240—Principles of Secondary Education	2
		Electives[2]	4

FOURTH YEAR[3]

	17 HOURS		14 HOURS
Ed. Prac. 250—School and Community Experiences	2	Professional Semester	
P.E.W. 205—Tests and Measurements	3	Ed. Prac. 238—Educational Practice for Special Fields in Elementary Schools	4
P.E.W./P.E.M. 209—History of Sport	3	Ed. Prac. 242—Educational Practice in Secondary School	4
P.E.W. 213—Teaching of Team Sports	4	P.E.W. 204—Organization of Physical Education	3
P.E.W. 215—Supervised Experience and Teaching, II	0	Sec. Ed. 241—Technic of Teaching in The Secondary School	3
Electives[2]	5		

NOTES

[1] Speech 111 and 112 may substitute for Rhetoric 101, 102, and Speech 101.
[2] Students enrolled in Option I must complete nine hours of humanities, including one sequence, two hours of elective credit in a physical education specialty, and a teaching minor of sixteen to twenty-four hours, depending upan the subject selected. For o list of teacher education minors, see page 255.
Students enrolled in Option II must complete nine hours of humanities, including one sequence, two hours of elective credit in a physical education specialty, and sixteen additional hours of general education selected from the areas of humanities, foreign languages, natural sciences, or social sciences.
[3] The professional semester for student teaching may be taken either semester in the senior year, depending on completian of prerequisites for the specified courses.

Teacher Education Minor in Physical Education For Women

	HOURS
Health Education	5
H.E. 281—First Aid, and	
H.E. 282—Organization of School Health Programs	
Square, Social and Folk Dance	2
P.E.W. 235—Square and Ballroom Dance	2
or P.E.W. 144—Square Dance, ond P.E.W. 142—Ballroom Dance, or	
P.E.W. 236—Folk Dance	2
Movement ond Exercises	1
Choose one: P.E.W. 100—Basic Movement, or P.E.W. 151—	
Basic Movement and Body Mechanics; P.E.W. 104—	
Modern Dance, or P.E.W. 157—Contemporary Dance, I	
Individual Sports	1
Choose one: P.E.W. 130—Badminton, P.E.W. 132—Bowling,	
P.E.W. 129—Archery; P.E.W. 137—Tennis, or P.E.W. 138—Advanced Tennis	
Team Sports	2
Choose two: P.E.W. 125—Hockey, or P.E.W. 152—Hockey and Volleyball;	
P.E.W. 120—Basketball, or P.E.W. 153—Basketball, Track and Field;	
P.E.W. 125—Softball, or P.E.W. 154—Softball and Gymnastics; P.E.W. 127—Speedball	
Teaching Courses in Physical Education and Dance	4 or 5
Choose the appropriate sequence:	
Sequence for Elementary School Teachers	5
P.E.W. 166—Elementary School Games, and P.E.W. 220—Physical Education for the Classroom Teacher, or P.E.W. 222—Physical Education in the Elementary School.	
Sequence for Secondary School Teachers	4
Choose one.	
P.E.W. 213—Teaching (team) Sports, and P.E.W. 215—Supervised Experiences	
P.E.W. 165—Teaching Swimming, and P.E.W. 167—Teaching Dance and Gymnastics	
P.E.W. 214—Teaching (individual) Sports, and P.E.W. 165—Teaching of Swimming	
P.E.W. 214—Teaching (individual) Sports, and P.E.W. 167—Teaching Dance and Gymnastics	
Elective Hours in Physical Education and Dance	4 or 5
Elective hours may be selected throughout all areas of physical education and dance. If a student is interested in a specific area of physical education and dance, she may concentrate in one chosen area. In that case it is recommended that the elective hours of activity and the sequence of teaching courses (see above) be taken in the same area.	
Suggested examples follow:	
Contemporary Dance Area—Choose from Physical Education for Women 104 or P.E.W. 157, Physical Education for Women 105, Dance 161, 162, 163 and teaching course Physical Education for Women 167.	
Gymnastics Area—Choose from Physical Education for Women 105, 104, or Dance 160, Physical Education for Women 156 and teaching course Physical Education for Women 167.	
Individual Sports Area—Choose from Physical Education for Women 130, 134, 132, 107, 129, 137, 136, or 138 and teaching course Physical Education for Women 214.	

Swimming Area—Choose from Physical Educaton for Women 111, 112, 114, 115, 116, or 117 and teaching course Physical Education for Women 165.
Team Sports Area—Choose from Physical Education for Women 125, 126, 120, 122, or 125 and teaching course Physical Education for Women 213.

Total Hours Required	20

Curricula in Recreation and Park Administration

For the Degree of Bachelor of Science in Recreation and Park Administration

The curricula in recreation and park administration given on the following pages are effective for students entering the College of Physical Education in September, 1969, and thereafter. Continuing students who entered the college before September, 1969, should consult the 1968–1969 *Undergraduate Study* catalog for the requirements they must meet.

The curricula are open to both men and women. A minimum of 132 hours of credit, including four semester hours of physical education, is required for graduation. A social science minor program of nineteen to twenty-four hours is a part of the general education requirements. Students are required to complete practical field training for a minimum of 560 hours over the period of their matriculation. In addition to general education and the professional core curriculum, students may select one of four options including General Recreation, Therapeutic Recreation, Outdoor Recreation, and Park Administration.

Students may enroll, on an elective basis, in two religious foundation courses of their own choice.

The following are the general education courses (sixty to seventy-two hours) required of all recreation major students:

GENERAL EDUCATION	HOURS
Basic courses as required:	
Rhet. 101—Freshman Rhetoric and Composition	3
Rhet. 102—Freshman Rhetoric and Composition	3
Rhet. 133—Principles of Composition, or	
Rhet. 251 or 272—Business Writing or Report Writing	3
Speech 101—Principles of Effective Speaking	3
Econ. 108—Elements of Economics	3
History	3 or 4
Mathematics (111, or 112 or equivalent)	3 to 5
Physical Education	4
Total, Basic Courses	25 to 28
Biological Sciences (one of the following sequences is required):	
Zool. 104—Elementary Zoology	4
and Bot. 100—General Botany	4
Zool. 104—Elementary Zoology	4
and Physiol. 103—Introduction to Human Physiology	4
Bot. 100—General Botany	4
and Physiol. 103—Introduction to Human Physiology	4
Biol. 100—Biological Science	4
and Biol. 101—Biological Science	4
Biol. 110—Principles of Biology, I	4
and Biol. 111—Principles of Biology, II	4
Total, Biological Science Courses	8
Social Sciences (one sequence is required from each of the following groups):	
Group I	
Pol. Sci. 150—American Government: Organization and Powers	3
and one other 300 level Political Science course to be selected with adviser	3
or Pol. Sci. 191—Principles of Political Science,	4
and Pol. Sci. 192—Comparative Governmental Functions	4

Group II	
Anth. 102—Introduction to Anthropology: The Origin of Man and Culture	4
or Social. 100—Introduction to Sociology	3
and one additional course in either Anthropology or Sociology	3 or 4
Group III	
Psych. 100—Introduction to Psychology	4
and one additional course in Psychology	3 or 4
Total, Social Sciences Courses	19 to 24
Humanities	
One course in Philosophy or Humanities	3 or 4
and any two other courses designated as humanities	5 to 8
Total, Humanities Courses	8 to 12

SUMMARY, GENERAL EDUCATION REQUIREMENTS

Basic Courses	25 to 28
Biological Sciences	8
Social Sciences:	19 to 24
Political Science	6 to 8
Sociology, Anthropology	6 to 8
Psychology	7 or 8
Humanities, as listed above	8 to 12
Total, General Education Requirement	60 to 72

PROFESSIONAL CORE CURRICULUM*

Professional Courses, as required:	HOURS
L.A. 226—Principles of Park Design	2
Rec. 100—Leisure: Its Uses and Resources	4
Rec. 110—Theories and Methods of Leadership	3
Rec. 180—Field Experience, I	1
Rec. 181—Field Experience, II	1
Rec. 200—Observation Trip	0
Rec. 210—Theories and Methods of Supervision	3
Rec. 215—Recreation Program Development	3
Rec. 240—Introduction to Outdoor Education and Recreation	3
Rec. 280—Pre-Practicum Seminar	0
Rec. 281—Professional Field Practicum	4
Rec. 290—Research in Recreation and Parks	3
Rec. 310—Introduction to Administration	3
Total	30

* Required of all students regardless of option.

OPTION IN GENERAL RECREATION

Related Professional Courses, as required:	HOURS
Geog. 214—Conservation of Natural Resources	3
Rec. 140—Principles of Camping	3
S.W. 333—Introduction to Social Group Work	2
U.P. 171—Planning of Cities and Regions	3
Total	11

RECOMMENDED ELECTIVES:

A second minor may be taken to develop depth in one or two areas, or a variety of courses may be taken to strengthen general education and professional competence. Advisers provide students with recommended courses in areas of study that may be of special interest to the student. Examples of such areas are: management, social research, art, dance, music, speech and theatre, sports.

RECAPITULATION, GENERAL RECREATION CURRICULUM

General Education	60 to 72
Professional Core Courses	30
Related Professional Courses	11
Electives	19 to 31
Total	132

OPTION IN PARK ADMINISTRATION

	HOURS
Related Professional Courses, as required:	
For. 101—General Forestry	3
Geog. 214—Conservation of Natural Resources	3
Hort. 221—Plant Propagation	3
Hort. 236—Turf Management	3
P.E.M. 272—Organization of Aquatic Programs	2
Rec. 140—Principles of Camping	3
Rec. 320—Park Management	3
U.P. 171—Planning of Cities and Regions	3
Total	23
Recommended Electives:	
Accy. 201—Fundamentals of Accounting	3
Bus. Adm. 210—Production Management and Organization	4
Bus. Adm. 351—Personnel Administration	3
Hort. 234—Nursery Management	3
Rec. 321—Recreational Use of Public Lands	3
Sec. Ed. 354—Audio-Visual Communication	3
Total	19

RECAPITULATION, PARK ADMINISTRATION CURRICULUM

General Education	60 to 72
Professional Core Courses	30
Related Professional Courses	23
Electives	7 to 16
Total	132

OPTION IN THERAPEUTIC RECREATION

	HOURS
Related Professional Courses, as required:	
P.E.M. 208—Theory of Prescribing Exercise	3
Physiol. 234—Human Anatomy and Physiology	5
Psych. 250—Psychology of Personality or Psych. 255—Social Psychology	3
Psych. 338—Abnormal Psychology	3
Rec. 230—Introduction to Therapeutic Recreation	3
S.W. 333—Introduction to Social Group Work	2
Total	19

Recommended Electives:	
Art. 190—Recreational Crafts	2
Art. 191—Recreational Crafts	2
Dance 235—Square and Ballroom Dance	2
Health Ed. 150—Health and Modern Life	2
Ed. Psych. 326—Introduction to Vocational Rehabilitation Counseling	3
Health Ed. 200—Mental Health	2
Health Ed. 216—Medical Terminology Correlated with Community Health Problems	3
Health Ed. 281—First Aid	2
P.E.M. 154—Swimming (men only)	2
P.E.M. 206—Kinesiology	3
P.E.M. 272—Organization of Aquatics Programs	2
Rec. 140—Principles of Camping	3
Sec. Ed. 354—Audio-Visual Communication	3
Spec. Ed. 117—Exceptional Children	3
Theatre 110—Recreational Dramatics	3
Total	37

RECAPITULATION, THERAPEUTIC RECREATION CURRICULUM

General Education	60 to 72
Professional Core Courses	30
Related Professional Courses	19
Electives	11 to 23
Total	132

OPTION IN OUTDOOR RECREATION

	HOURS
Related Professional Courses, as required:	
Anth. 369—Introduction to Human Ecology	3
Chem. 101—General Chemistry	3 or 4
For. 101—General Forestry	3
Geog. 214—Conservation of Natural Resources	3
Geog. 314—Regional Problems in Conservation of Natural Resources	3
Rec. 140—Principles of Camping	3
Rec. 320—Park Management	3
Rec. 321—Recreational Use of Public Lands	3
Total	24 or 25

RECOMMENDED ELECTIVES:

INTERPRETIVE NATURALIST

Bot. 260—Introductory Plant Taxonomy	3
Bot. 381—Plant Ecology, or Zool. 345—Animal Ecology	5
Geol. 101—Physical Geology	4
Sec. Ed. 354—Audio-Visual Communication	3
Zool. 304—Field and Systematic Zoology	5
Zool. 335—Ornithology	3
Total	23

RECREATION PLANNER OF PUBLIC LANDS

Agr. Econ. 381—Land Economics	3
Agron. 101—Introductory Soils	3
G.E. 101—Engineering Graphical Communications	3
Geol. 101—Physical Geology	4
Sec. Ed. 354—Audio-Visual Materials and Problems	2
U.P. 171—Planning Cities and Regions	3
Total	18

RECAPITULATION, OUTDOOR RECREATION CURRICULUM

General Education	60 to 72
Professional Core Courses	30
Related Professional Courses	24 or 25
Electives	5 to 18
Total	132

Minor in Recreation for Non-Recreation Majors

	HOURS
Rec. 100—Leisure: Its Uses and Resources	4
Rec. 110—Theories and Methods of Leadership	3
Rec. 210—Theories and Methods of Supervision	3
Rec. 215—Recreation Program Development	3
Rec. 240—Introduction to Outdoor Education and Recreation	3
Two additional courses to be selected with recreation adviser	4 to 6
Total	20 to 22

One type of social work practice; helping a family with marriage troubles and parent-child problems.

Jane Addams Graduate School of Social Work

The Jane Addams Graduate School of Social Work offers an undergraduate minor in social work, a cooperative interdepartmental major and minor in social welfare, and a program of graduate study leading to the professional degree of Master of Social Work. Students desiring help in planning their undergraduate programs are urged to consult the School's undergraduate adviser.

The undergraduate courses in social work and social welfare are for those individuals who wish to explore the field of social work as a career and for those who will be employed in social welfare and related fields. Teachers, ministers, counselors in school and industry, and those working in health and recreation find these courses helpful.

These undergraduate courses describe the history and philosophy of social welfare and the major methods of social work practice—casework, group work, and community organization. Opportunities for employment in social welfare include a broad array of positions with governmental and private social services.

MINOR IN SOCIAL WORK

Undergraduate courses in social work may be utilized in combination with the social sciences or education to meet the minor requirements in the Departments of Anthropology, Economics, Political Science, Psychology, and Sociology.

From eight to twelve hours should be taken from the following courses:

	HOURS
S.W. 225—Introduction to Social Work, I	3
S.W. 226—Introduction to Social Work, II	3
S.W. 300—Methods of Intervention	3
S.W. 316—Social Services for Children	3
S.W. 333—Introduction to Social Group Work	2

The other requirements of the minor, consisting of eight to twelve hours, should be chosen from a suitable field in consultation with the departmental adviser in the major subject. Although major advice is given by the department concerned, the undergraduate adviser in the School of Social Work is glad to give advice regarding appropriate courses.

COOPERATIVE INTERDEPARTMENTAL MAJOR AND MINOR IN SOCIAL WELFARE

The cooperative interdepartmental major and minor in social welfare is a joint offering of the College of Liberal Arts and Sciences and the School

of Social Work. This undergraduate curriculum was constructed with the intent of providing fundamental knowledge on a broad interdisciplinary basis for the field of social welfare.

The student majoring in social welfare must complete the basic requirements of the sciences and letters curriculum, a course in statistics or nonstatistical research methodology, at least twelve hours of course work in social work and social welfare, and at least twenty-eight hours in selected courses from eight departments. The program in social welfare is described on pages 377 and 378.

PROFESSIONAL EDUCATION FOR SOCIAL WORK

In preparation for the professional degree program, the student must meet the University of Illinois' requirements for admission to the Graduate College. Undergraduate work should include a sound general education and a concentration of courses in the social sciences and social work. Carefully selected courses in the fields of Anthropology, Economics, History, Home Economics, Philosophy, Political Science, Psychology, and Sociology acquaint the student with the nature of social organization, the dynamics of human behavior, the economic order, and the functions of the various areas of government.

Competence in written and oral expression is important to the social worker; therefore, more than the required number of courses in these areas may be in order. The undergraduate program should also include a course in statistics. It is important that attention be given to quality of scholarship, since the student with the higher grade-point average may be eligible to apply for a University Fellowship or a financial grant from other sources. The latter are available to graduate students through the School of Social Work.

Information about professional social work education is available at the offices of the Jane Addams Graduate School of Social Work, 1207 West Oregon Street, Urbana, Illinois, 61801, and 1300 University Hall, University of Illinois at Chicago Circle, 601 South Morgan Street, P.O. Box 4348, Chicago, Illinois 60680.

Students learn to use modern equipment and latest techniques in surgery class.

College of Veterinary Medicine

The College of Veterinary Medicine educates men and women in medical disciplines involving the animal kingdom. The four-year professional curriculum leads to the degree of Doctor of Veterinary Medicine. The program gives students a broad foundation in fundamentals of biological and physical sciences, and practical knowledge in the application of these principles to the prevention, control, and eradication of animal diseases, including those transmissible between man and other animals. The college also strives to impart and emphasize the role of veterinary medical service, responsibility, and obligation to society.

Present-day veterinary medicine offers an almost unlimited variety of intellectual and scientific challenges. A majority of graduate veterinarians engage in specialized animal practice. Many doctors of veterinary medicine are involved in public health activities which include controlling and eradicating diseases, assuring and protecting the safety and wholesomeness of meat and other food products, developing and supervising the production of biological products and drugs, and enforcing health regulations for animals exported and imported as well as those shipped within and between states. Still other veterinarians engage in teaching and research. Teaching includes extension activities and resident instruction for undergraduate, professional, and graduate students. Veterinary research conducted in colleges, industry, and government institutions covers a broad field of interest including work with animals sent into outer space, radioactive hazards and injury, problems of pesticide and antibiotic contamination, and basic investigations of little understood body functions. Increasing numbers of veterinarians are needed to insure the health of animals in homes, zoos, public parks, racing stables, medical and veterinary research colonies, fur farms, ranches, and humane society shelters. A wide horizon of endeavor and service awaits the veterinary medicine graduate.

Sixty hours of preveterinary medical instruction are required for admission. Preveterinary students may register in the College of Liberal Arts

and Sciences (page 383) or the College of Agriculture (page 222), or enroll for preveterinary instruction in other schools or colleges of accredited institutions.

Students in the four-year professional curriculum receive the benefit of an instructional program which is constantly enriched by the latest advances in the science and art of veterinary medicine. The first two years are devoted largely to basic veterinary medical subjects; the final two years consist chiefly of instruction in applied clinical subjects such as medicine, surgery, and obstetrics. Selected courses in animal science, biochemistry, genetics, and microbiology are required during the first three years. A major share of fourth-year instruction is in clinic and laboratory areas, enabling students to apply knowledge gained in classroom and laboratory work to the diagnosis, prevention, treatment, suppression, and eradication of disease.

Graduate programs leading to advanced degrees in veterinary medical science are open to graduates in veterinary medical and allied sciences. Research emphasis is placed on the cause, prevention, treatment, suppression, and eradication of animal diseases. Such graduate study offers the opportunity to acquire the highly specialized competence required for today's veterinary medical research, teaching, and scientific effort.

The college is affiliated with the Agricultural Experiment Station and Extension Service in research and extension, and is a component of the Graduate College. It cooperates with the State Department of Agriculture in the laboratory diagnosis of animal diseases and demonstrational programs of animal disease control and also with the Illinois Department of Public Health on the zoonoses, and with the State Natural History Survey and the Illinois Department of Conservation in research on diseases of wildlife.

Inquiries pertaining to the curriculum in veterinary medicine and the functions of the college should be addressed to the Dean, College of Veterinary Medicine, University of Illinois at Urbana-Champaign, Urbana, Illinois 61801.

REQUIREMENTS FOR ADMISSION

Applicants for admission to the College of Veterinary Medicine must present not less than sixty semester hours of acceptable credit from a recognized college or university, exclusive of military training and physical education. The sixty semester hours must be distributed as follows:

	HOURS
Chemistry (including organic and quantitative analysis)	16
Biological Science (biology including botany and general zoology)	8
Physics (including laboratory)	8
Foreign Language[1]	6
English Composition and Rhetoric	6
Electives:	
Social Science Sequence courses[2]	6
Humanities Sequence courses[2]	6
Free electives	4
Total	60

NOTES

[1] The foreign language requirement may be fulfilled by three years of one foreign language from an accredited high school or by demonstrating competency equivalent to one year of foreign

language at the college level. Competence may be demonstrated by placement examination or by successful completion of the second semester of the language.
[2] These are part of the General Education Sequence requirements. See page 154.

Each applicant for admission to the College of Veterinary Medicine, whether from the University or from another institution, must have attained in his preveterinary work a scholastic average of not less than 3.5, or the equivalent as determined by the University for institutions using a different grading system. However, a scholastic average of 3.5 by itself does not assure admission.

In considering applications for admission, preference is given to candidates who are residents of Illinois and to Illinois veterans. Next preference is given to residents of states that do not have veterinary medical colleges and last to residents of states with such colleges, and to foreign students. Students are admitted by the Director of Admissions and Records on the basis of grade-point average and other qualifications. Selection is made by a Committee on Admissions composed of the Director of Admissions and Records of the University and members of the faculty of the college appointed by the Dean.

A student who desires admission to the College of Veterinary Medicine should write to the Director of Admissions and Records during the first semester or quarter of his final year of preveterinary medical study. The application for admission to the college is considered as soon as the Office of Admissions and Records has received complete credentials for all preveterinary courses completed prior to the final semester or term of such study, and an official statement of the courses in progress during the final semester or term. (In the case of a student who plans to complete admission requirements by summer work, a written statement of his proposed summer program should accompany the official transcript.) In all cases, the formal application and credentials should be in the hands of the Director of Admissions and Records no later than March 1.

Candidates may, at the discretion of the Committee on Admissions to the College of Veterinary Medicine, be required to appear for personal interviews and to present test scores.

REQUIREMENTS FOR GRADUATION

Students who have fulfilled their general education sequence requirements and passed all courses of the first two years of the veterinary medical curriculum, and who have compiled a cumulative grade-point average of 3.0 or better in these courses, are eligible for the degree of Bachelor of Science in Veterinary Medicine.

Students who have passed all courses in the four-year vetrinary medical curriculum and who have an average of 3.0 or better in these courses are eligible for the degree of Doctor of Veterinary Medicine.

HONORS AT GRADUATION

Honors are awarded to superior students in the professional curriculum. For graduation with honors, a student must have an average of not less than 4.35 in all courses completed in the College of Veterinary Medicine; for graduation with High Honors, an average of not less than 4.75 is required.

Curriculum in Veterinary Medicine

For the Degree of Doctor of Veterinary Medicine

FIRST YEAR[1] FIRST SEMESTER	CREDIT HOURS	CLOCK HOURS	SECOND SEMESTER	CREDIT HOURS	CLOCK HOURS
An. Sci. 110—Plant and Animal Genetics	3	4	An. Sci. 325—Principles and Application of Animal Nutrition	5	6
Biochem. 354—Biochemistry	3	3	V.B.S. 302—Gross Anatomy	4	8
Biochem. 356	3	6	V.B.S. 303—Microscopic Organology	3	6
V.B.S. 300—Gross Anatomy	5	12	V.B.S. 305—Developmental Anatomy	3	3
V.B.S. 301—Microscopic Anatomy	4	7	V.P.H. 331—Veterinary Bacteriology	5	9
V.P.H. 330—Veterinary Medical History and Orientation	1	1			
Total	19	33	Total	20	31
SECOND YEAR					
V.P.H. 332—Veterinary Microbiology and immunology	4	7	An. Sci. 201—Livestock Management	5	5
V.P.H. 333—Protozoan and Arthropod Parasites	3	5	V.P.H. 335—Special Pathology	5	9
V.P.H. 334—General Pathology	5	9	V.P.H. 336—Helminth Parasites	3	5
V.P.P. 315—Physiology	5	8	V.PP. 316—Physiology	4	7
V.P.P. 319—Radiophysiology	2	3	V.P.P. 318—Pharmacology	4	6
Total	19	32	Total	21	32
THIRD YEAR					
V.C.M. 363—Reproduction, Obstetrics and Genital Diseases	3	3	V.B.S. 304—Applied Anatomy	2	4
V.C.M. 360—Diseases of Small Animals	5	5	V.C.M. 375—Reproduction, Obstetrics and Genital Diseases	2	4
V.C.M. 361—General Surgery	3	4	V.C.M. 364—Diseases of Large Animals	5	5
V.C.M. 362—Clinical and Laboratory Practice[2]	2	7	V.C.M. 365—Special Surgery	5	11
V.C.M. 337—Clinical Pathology Conference	0	1	V.C.M. 366—Clinical Laboratory Practice	2	7
V.P.H. 338—Clinical Pathology	2	4	V.C.M. 367—Radiology	2	3
V.P.P. 320—Pharmacology and Toxicology	4	8	V.P.H. 337—Clinical Pathology Conference	0	1
			V.P.P. 324—Veterinary Nutrition	3	3
Total	19	32	Total	21	38
FOURTH YEAR					
V.C.M. 368—Diseases of Large Animals	4	4	Accy. 203—Accountancy	2	2
V.C.M. 369—Diseases of Small Animals	2	2	V.C.M. 372—Veterinary Jurisprudence and Ethics	3	3
V.C.M. 370—Seminar	1	1	V.C.M. 373—Seminar	1	1
V.C.M. 371—Clinical and Laboratory Practice	8	29	V.C.M. 374—Clinical and Laboratory Practice	8	29
V.P.H. 339—Clinical Pathology Conference	0	1	V.P.H. 339—Clinical Pathology Conference	0	1
V.P.H. 340—Diseases of Poultry	3	3	V.P.H. 341—Food Hygiene and Public Health	5	6
V.P.H. 346—Management and Diseases of Laboratory Animals[3]	2	2	Total	19	42
Total	18 or 20	40 or 42			

NOTES

[1] Only those students who have completed sixty hours of semester credit as described on page 444, are eligible to begin the first year's work in the College of Veterinary Medicine.
[2] Assignments outside of regularly scheduled clinic hours are made and must be adhered to by the students involved in each instance.
[3] Elective—may be taken first semester of fourth year.

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